

Systemic Cytokine Alterations in Periodontitis Independent of Comorbidities: A Systematic Review and Meta-Analysis

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Supplementary Table 1. Search strategy construction for PubMed, Web of Science and Scopus.

PubMed		
Search block	Search terms	Studies identified
1. Disease	periodontal diseases[mesh] OR periodontal disease*[tiab] OR periodontitis[tiab] OR parodontosis[tiab] OR parodontoses[tiab]	117923
2. Biological sample	Serum[mesh] OR blood[mesh:noexp] OR plasma[mesh] OR serum[tiab] OR blood[tiab] OR plasma[tiab]	4026811
3. Inflammation-related proteins (MeSH-terms)	c-reactive protein[mesh] OR chemokines[mesh] OR interleukins[mesh] OR cytokines[mesh:noexp] OR interferons[mesh] OR matrix metalloproteinases[mesh] OR Tumor Necrosis Factors[mesh] OR integrins[mesh] OR selectins[mesh] OR proteomics[mesh] OR prostaglandins[mesh] OR immunoglobulins[mesh] OR neuropeptides[mesh] OR kinins[mesh] OR adipokines[mesh]	2270016
4. Inflammation-related proteins (Free text/keywords)	High sensitivity C reactive protein[tiab] OR chemokine*[tiab] OR Interferon*[tiab] OR growth factor*[tiab] OR Tumor necrosis factor*[tiab] OR Matrix metalloproteinase*[tiab] OR cytokine*[tiab] OR prostaglandin*[tiab] OR integrin*[tiab] OR interleukin*[tiab] OR selectin*[tiab] OR Protein*[tiab] OR Cytokine*[tiab] OR biomarker*[tiab] OR "marker inflammation"[tiab::~3] OR "marker inflammatory"[tiab::~3] OR Olink[tiab] OR "mediator inflammation"[tiab::~3] OR "mediator inflammatory"[tiab::~3] OR proteomics[tiab] OR immunoglobulin*[tiab] OR Resolvin*[tiab] OR complement factor*[tiab] OR neuropeptide*[tiab] OR kinin*[tiab] OR adipokines[tiab]	5278579
5. All inflammation-related proteins	#3 OR #4	6339778
6. Combined core search	#1 AND #2 AND #5	5367
7. Systematic review & meta-analysis filter	Meta-Analysis[mesh] OR review[pt] OR systematic review[pt] OR meta-analysis[pt] OR Cochrane Database Syst Rev[ta] OR "systematic review"[tiab::~3] OR meta analys*[tiab] OR metaanalys*[tiab]	3689210
8. Core search excluding systematic reviews / Meta-analysis	#6 NOT #7	4984
Web of Science		
Search block	Search terms	Studies identified
1. Disease	TS=("periodontal disease" OR periodontitis OR parodontosis OR parodontoses)	62810
2. Biological sample	TS=(Serum OR blood OR plasma)	5369096
3. Inflammation-related proteins	TS=("High sensitivity C reactive protein" OR chemokine* OR Interleukin* OR Interferon* OR "growth factor" OR "Tumor necrosis factor" OR "Matrix metalloproteinase" OR cytokine* OR prostaglandin* OR integrin* OR selectin* OR Protein* OR biomarker* OR (marker* NEAR/3 (inflammation* OR inflammatory)) OR Olink OR (mediator NEAR/3 (inflammation* OR inflammatory)) OR proteomics OR immunoglobulin* OR Resolvin* OR "complement factor" OR neuropeptide* OR kinin* OR adipokines)	7569464
4. Combined core search	#1 AND #2 AND #3 Timespan: 1980-01-01 to 2024-10-13	5469
5. Filter – articles only	Filter – Document type: Article	4878

SUPPLEMENTARY DATA

Scopus		
Search block	Search terms	Studies identified
1. Disease	TITLE-ABS-KEY("periodontal disease" OR periodontitis OR parodontosis OR parodontoses)	109599
2. Biological sample	TITLE-ABS-KEY(Serum OR blood OR plasma)	7784052
3. Inflammation-related proteins	TITLE-ABS-KEY("High sensitivity C reactive protein" OR chemokine* OR Interleukin* OR Interferon* OR "growth factor" OR "Tumor necrosis factor" OR "Matrix metalloproteinase" OR cytokine* OR prostaglandin* OR integrin* OR selectin* OR Protein* OR biomarker* OR (marker* W/3 (inflammation* OR inflammatory)) OR Olink OR (mediator W/3 (inflammation* OR inflammatory)) OR proteomics OR immunoglobulin* OR Resolvin* OR "complement factor" OR neuropeptide* OR kinin* OR adipokines)	9913757
4. Combined core search	1 AND 2 AND 3	7865
5. Filter – articles only	Filter – Document type: Article	6687
6. Systematic review & meta-analysis filter	(INDEXTERMS("systematic review" OR "meta analysis")) OR (TITLE-ABS((systematic W/3 review) OR meta-analys* OR metaanalys*))	800536
7. Core search excluding systematic review / meta-analyses	5 AND NOT 6	6609

Supplementary Table 2. Study Quality Assessment Template: Newcastle-Ottawa Scale modified for cross-sectional studies

Selection: (Maximum 5 stars)

1. Representativeness of the cases
 - a) Truly representative of the average in the target population (all subjects or random sampling). *
 - b) Somewhat representative of the average in the target group (non-random sampling). *
 - c) Selected group of users/convenience sample
2. Sample size
 - a) Justified and satisfactory (including sample size calculation). *
 - b) Sufficient, ≥ 30 participants in each studied group*
 - c) Not justified/ information provided
3. Non-respondents
 - a) Comparability between respondents and non-respondents characteristics is established*
 - b) Unsatisfactory recruitment rate, no summary data on non-respondents
 - c) No information provided
4. Ascertainment of exposure
 - a) Full-mouth clinical periodontal examination including radiographic imaging **
 - b) Partial periodontal recordings *
 - c) No description

Comparability: (Maximum 2 stars)

1. Comparability of subjects
 - a) Results are adjusted for all relevant risk factors (age, sex, smoking status and other systemic diseases) **
 - b) Results are adjusted for ≥ 1 relevant risk factor *
 - c) Data/results are not adjusted for all relevant confounders/risk factors information not provided

Outcome: (Maximum 3 stars)

1. Assessment of outcome
 - a) Independent blind assessment using objective validated laboratory methods. **
 - b) Unblinded assessment using objective validated laboratory methods. **
 - c) Used non-standard or non-validated laboratory methods with gold standard. *
 - d) No description/non-standard laboratory methods used
2. Statistical test
 - a) Statistical test used to analyse the data clearly described, appropriate and measures of association presented including confidence interval and probability level (p-value). *
 - b) Statistical test not appropriate, not described or incomplete.

Criteria for study quality assessment.

Number of stars	Quality rating
9-10*	Very good study
7-8*	Good study
5-6*	Satisfactory study
< 5*	Unsatisfactory study

Supplementary Table 3. Included studies

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Supplementary Table 4. Excluded studies during full-text review

Author and year	Title	Reason for exclusion
Abolfazli 2015	Effect of Non-surgical Periodontal Therapy on Serum and Salivary Concentrations of Visfatin in Patients with Chronic Periodontitis.	No periodontally healthy control group
Abu-Raya 2007	Chronic inflammatory autoimmune disorders and atherosclerosis	Did not fulfill criteria for periodontitis
Acharya 2010	Cardioprotective effect of periodontal therapy in metabolic syndrome: a pilot study in Indian subjects.	Analyte out of scope
Acharya 2015	Effect of scaling and root planing on serum interleukin-10 levels and glycemic control in chronic periodontitis and type 2 diabetes mellitus	Other
Acharya 2017	Cytokine ratios in chronic periodontitis and type 2 diabetes mellitus.	Did not fulfill criteria for periodontitis
Acharya 2018	Systemic Cytokines in Type 2 Diabetes Mellitus and Chronic Periodontitis.	Full text not available/wrong language
Acharya 2021	Erythrocyte Sedimentation Rate as an Alternative to C-Reactive Protein in Rheumatoid Arthritis Patients with Periodontitis	Full text not available/wrong language
Ademowo 2020	Distribution of plasma oxidised phosphatidylcholines in chronic kidney disease and periodontitis as a co-morbidity	Did not fulfill criteria for periodontitis
Agarwal 1994	Role of cytokines in the modulation of neutrophil chemotaxis in localized juvenile periodontitis.	Full text not available/wrong language
Aguilera 2021	Association between Periodontitis and Blood Pressure Highlighted in Systemically Healthy Individuals: Results from a Nested Case-Control Study	Analyte out of scope
Ahmad 2018	C-Reactive Protein Levels and Periodontal Diseases During Pregnancy in Malaysian Women.	Full text not available/wrong language
Ahmed 2023	Matrix Metalloproteinase Activity in Gingival Crevicular Fluid and Periodontal Health Status in Down Syndrome Patients: A Comparative Study.	Did not fulfill criteria for periodontitis
Ahn 2012	Periodontal disease, Porphyromonas gingivalis serum antibody levels and orodigestive cancer mortality.	Analyte out of scope
Ajwani 2003	Oral health status, C-reactive protein and mortality--a 10 year follow-up study.	Did not fulfill criteria for periodontitis
Akalin 2007	Lipid peroxidation levels and total oxidant status in serum, saliva and gingival crevicular fluid in patients with chronic periodontitis	Analyte out of scope
Akcali 2016	Effect of gingival inflammation on the inflammatory response in patients with idiopathic uveitis.	Wrong study population/design
Akinkugbe 2017	Do Genetic Markers of Inflammation Modify the Relationship between Periodontitis and Nonalcoholic Fatty Liver Disease? Findings from the SHIP Study.	Analyte out of scope
Akman 2012	Serum plasminogen activator inhibitor-1 and tumor necrosis factor- α levels in obesity and periodontal disease.	Other primary disease/condition
Albandar 2001	Associations between serum antibody levels to periodontal pathogens and early-onset periodontitis.	Analyte out of scope
Al-Bayaty 2011	Interrelationship between antioxidant, C-reactive proteins, cotinine levels and periodontal diseases in smokers and non smokers	Full text not available/wrong language
Alexander 2011	Association between γ ' fibrinogen levels and inflammation.	Other primary disease/condition
Al-Ghamdi 2007	Serum antibody levels in smoker and non-smoker saudi subjects with chronic periodontitis.	Analyte out of scope
AlHabashneh 2015	Ozone as an adjunct to conventional nonsurgical therapy in chronic periodontitis: a randomized controlled clinical trial.	Analyte out of scope
Allen 2011	Oxidative and inflammatory status in Type 2 diabetes patients with periodontitis.	Analyte out of scope
Almaghlouth 2014	Effect of periodontal treatment on peak serum levels of inflammatory markers.	No periodontally healthy control group

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Al-Momani 2021	Indocyanine-mediated antimicrobial photodynamic therapy promotes superior clinical effects in stage III and grade C chronic periodontitis among controlled and uncontrolled diabetes mellitus: A randomized controlled clinical trial.	Analyte out of scope
AL-Rmmahi 2021	Assessment of IL-17 Level in Biofluids of Periodontopathic patients and Healthy Individuals	Full text not available/wrong language
Al-Taweel 2021	Assessment of serum interleukin-1 β and Interleukin-6 levels in patients with chronic periodontitis and coronary heart disease	Other reason for exclusion
Altay 2013	Changes in inflammatory and metabolic parameters after periodontal treatment in patients with and without obesity.	Other primary disease/condition
Altıngöz 2021	Salivary and serum oxidative stress biomarkers and advanced glycation end products in periodontitis patients with or without diabetes: A cross-sectional study.	Analyte out of scope
Alyousef 2017	Chemically modified tetracyclines an emerging host modulator in chronic periodontitis patients: A randomized, double-blind, placebo-controlled, clinical trial.	Analyte out of scope
Al-Zahrani 2012	Effect of periodontal treatment on serum C-reactive protein level in obese and normal-weight women affected with chronic periodontitis.	Analyte out of scope
Amabile 2008	Severity of periodontal disease correlates to inflammatory systemic status and independently predicts the presence and angiographic extent of stable coronary artery disease.	Other primary disease/condition
Amaliya 2015	Java project on periodontal diseases: periodontal bone loss in relation to environmental and systemic conditions.	Did not fulfill criteria for periodontitis
Amar 2003	Periodontal disease is associated with brachial artery endothelial dysfunction and systemic inflammation.	Analyte out of scope
Amarasena 2008	Association between serum calcium and periodontal disease progression in non-institutionalized elderly.	Did not fulfill criteria for periodontitis
Ameen 2020	Evaluation of cardiac biomarkers in smokers and non-smokers with chronic periodontitis.	Analyte out of scope
Anbarcioglu 2019	Vitamin D deficiency in patients with aggressive periodontitis.	Analyte out of scope
AndiWiyanto 2018	The relationship between interleukin-18 level in smokers and chronic periodontitis: Radiographic overview of posterior mandibular teeth	Serum not analyzed
Ando 2010	Immune response to cytolethal distending toxin of <i>Aggregatibacter actinomycetemcomitans</i> in periodontitis patients	Analyte out of scope
Andreu 2021	Serum Inflammatory and Prooxidant Marker Levels in Different Periodontal Disease Stages.	Analyte out of scope
Andrukhov 2011	Serum cytokine levels in periodontitis patients in relation to the bacterial load.	Did not fulfill criteria for periodontitis
Andrukhov 2013	Nitric oxide production, systemic inflammation and lipid metabolism in periodontitis patients: possible gender aspect.	Analyte out of scope
Anil 1990	Immunology of chronic generalized periodontitis. 1. Estimation of cellular and humoral immune status.	Full text not available/wrong language
Anil 1990	Cell-mediated and humoral immune responses in diabetic patients with periodontitis	Did not fulfill criteria for periodontitis
Anitha 2013	Comparative evaluation of levels of C-reactive protein and PMN in periodontitis patients related to cardiovascular disease.	Analyte out of scope
Anitha 2015	Estimation of high sensitivity C-reactive protein in patients with periodontal disease and without coronary artery disease.	Analyte out of scope
Antonoglou 2015	Low serum level of 1,25(OH) $_2$ D is associated with chronic periodontitis.	Did not fulfill criteria for periodontitis
Antonopoulou 2003	Hydroxyl-platelet-activating factor exists in blood of healthy volunteers and periodontal patients.	Serum not analyzed
Anusaksathien 1992	Autoimmunity to collagen in adult periodontal disease: immunoglobulin classes in sera and tissue.	Did not fulfill criteria for periodontitis

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Anwar 2016	Association of C-reactive protein levels with periodontitis and type II diabetes mellitus	Did not fulfill criteria for periodontitis
Aoyama 2017	Periodontitis deteriorates peripheral arterial disease in Japanese population via enhanced systemic inflammation.	Other primary disease/condition
Aoyama 2019	Increased Heart Failure Prevalence in Patients with a High Antibody Level Against Periodontal Pathogen.	Did not fulfill criteria for periodontitis
Aoyama 2019	Periodontal condition in Japanese coronary heart disease patients: A comparison between coronary and non-coronary heart diseases.	Did not fulfill criteria for periodontitis
Aoyama 2021	Association of Periodontal Status, Number of Teeth, and Obesity: A Cross-Sectional Study in Japan.	Did not fulfill criteria for periodontitis
Apatzidou 2004	Quadrant root planing versus same-day full-mouth root planing: III. Dynamics of the immune response	Analyte out of scope
Apatzidou 2005	Impact of smoking on the clinical, microbiological and immunological parameters of adult patients with periodontitis	Analyte out of scope
Aramaki 1998	Presence of activated B-1 cells in chronic inflamed gingival tissue.	Did not fulfill criteria for periodontitis
Ardila 2014	Association between immunoglobulin G1 against Tannerella forsythia and reduction in the loss of attachment tissue.	Analyte out of scope
Ardila 2015	Comparison of serum amyloid A protein and C-reactive protein levels as inflammatory markers in periodontitis.	Analyte out of scope
Ardila 2016	High levels of Porphyromonas gingivalis-induced immunoglobulin G2 are associated with lower high-density lipoprotein levels in chronic periodontitis.	Analyte out of scope
Ardila 2016	Association of Porphyromonas gingivalis with high levels of stress-induced hormone cortisol in chronic periodontitis patients	No periodontally healthy control group
Arora 2013	The adjunctive use of systemic antioxidant therapy (lycopene) in nonsurgical treatment of chronic periodontitis: a short-term evaluation.	Full text not available/wrong language
Arora 2014	Periodontal infection, impaired fasting glucose and impaired glucose tolerance: Results from the Continuous National Health and Nutrition Examination Survey 2009-2010	Analyte out of scope
Arregoces 2014	Relation between ultra-sensitive C-reactive protein, diabetes and periodontal disease in patients with and without myocardial infarction.	Analyte out of scope
Arumuganainar 2024	Evaluation of CD44 antigen in type 2 diabetic patients with periodontitis: An immunohistochemical study	Analyte out of scope
Arunachalam 2019	Clinical and Biochemical Valuation of Enzymatic and Nonenzymatic Stress Markers Following Full-mouth Disinfection in Aggressive Periodontitis.	Full text not available/wrong language
Arvanitidis 2017	Reduced platelet hyper-reactivity and platelet-leukocyte aggregation after periodontal therapy.	No periodontally healthy control group
Assinger 2011	Periodontopathogens induce soluble P-selectin release by endothelial cells and platelets.	Plasma/whole blood analyzed
Assinger 2012	Periodontopathogens induce expression of CD40L on human platelets via TLR2 and TLR4.	Plasma/whole blood analyzed
Atici 1998	Analysis of gingival crevicular fluid intracytoplasmic enzyme activity in patients with adult periodontitis and rapidly progressive periodontitis. A longitudinal study model with periodontal treatment	Did not fulfill criteria for periodontitis
Auerkari 2013	CRP and IL-1B Gene Polymorphisms and CRP in Blood in Periodontal Disease.	Did not fulfill criteria for periodontitis
Aukhil 1988	The effects of periodontal therapy on serum antibody (IgG) levels to plaque microorganisms.	Did not fulfill criteria for periodontitis
Awartani 2010	Serum immunoglobulin levels in type 2 diabetes patients with chronic periodontitis.	No periodontally healthy control group
Aydin 2021	Measurement of Oncostatin M, Leukemia Inhibitory Factor, and Interleukin-11 Levels in Serum, Saliva, and Gingival Crevicular Fluid of Patients with Periodontal Diseases	Full text not available/wrong language

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Aydin 2023	Total, free, and bioavailable 25-hydroxyvitamin D levels in patients with periodontitis (stage III): a case-control study.	Did not fulfill criteria for periodontitis
Azab 2022	The Impact of Nonsurgical Periodontal Therapy on Serum Levels of Dickkopf-Related Protein-1 in Smokers and Nonsmokers with Periodontitis: A Prospective Comparative Study.	No periodontally healthy control group
Aziz 2013	Assessment of Some Biochemical Oxidative Stress Markers in Male Smokers with Chronic Periodontitis	Analyte out of scope
Azizi 2015	Effects of smoking severity and moderate and severe periodontitis on serum C-reactive protein levels: an age- and gender-matched retrospective cohort study.	Analyte out of scope
Babaloo 2018	Evaluation of Clinical Periodontal Indices and Serum Interleukin-27 by One-stage Full-mouth Disinfection and Quadrant Scaling and Root Planing in Periodontitis.	No periodontally healthy control group
Babladi 2019	Influence of non-surgical periodontal therapy on insulin resistance in chronic periodontitis subjects with prediabetes	Did not fulfill criteria for periodontitis
Babür 2012	Gingival crevicular fluid levels of osteoprotegerin (OPG) in premenopausal and postmenopausal women with or without chronic periodontitis.	Other primary disease/condition
Baddam 2021	Evaluation of Gingival Crevicular Fluid and Serum Tartrate-resistant Acid Phosphatase Levels in Subjects with Clinically Healthy Periodontium and Chronic Periodontitis - A Clinico-biochemical Study.	Did not fulfill criteria for periodontitis
Bagwe 2020	GCF and serum levels of omentin in periodontal health and disease of diabetic and non-diabetic individuals: A comparative study.	Full text not available/wrong language
Baha 2019	Cryoglobulin responses and herd immunity plots among periodontitis patients	Analyte out of scope
Bahammam 2021	Expression of Vascular Endothelial Growth Factor Using Platelet Rich Fibrin (PRF) and Nanohydroxyapatite (nano-HA) in Treatment of Periodontal Intra-Bony Defects - A Randomized Controlled Trial.	Serum not analyzed
Bahrani-Mougeot 2008	Systemic host immuno-inflammatory response to dental extractions and periodontitis.	Wrong study population/design
Bains 2023	Quantitative Association of Platelet-Rich Fibrin (PRF) and Hyperacute Serum (HAS) with Glycemic Control (HbA1c) in Chronic Periodontitis Patients: An Ex vivo Study.	Analyte out of scope
Bajaj 2018	Periodontal therapy favorably modulates the oral-gut-hepatic axis in cirrhosis.	Did not fulfill criteria for periodontitis
Bakshi 2018	Estimation of Plasma Levels of Tumor Necrosis Factor- α , Interleukin-4 and 6 in Patients with Chronic Periodontitis and Type II Diabetes Mellitus.	Did not fulfill criteria for periodontitis
Balaji 2015	Gingival, plasma and salivary levels of melatonin in periodontally healthy individuals and chronic periodontitis patients: A pilot study	Did not fulfill criteria for periodontitis
Balaji 2020	Salivary, Plasma, and Gingival Levels of Melatonin and TNF- α in Nonsmokers and Current Smokers with and without Periodontal Disease.	Plasma/whole blood analyzed
BalciYuce 2017	Assessment of local and systemic 25-hydroxy-vitamin D, RANKL, OPG, and TNF levels in patients with rheumatoid arthritis and periodontitis.	Did not fulfill criteria for periodontitis
Balitska 2019	Associations between proinflammatory cytokines and chronic generalized periodontitis in patients with type 2 diabetes mellitus	Full text not available/wrong language
Ballambettu 2019	Higher interleukin-33 levels in aggressive periodontitis cases.	Plasma/whole blood analyzed
Ballini 2010	The role of anti-cyclic citrullinated peptide antibody in periodontal disease.	Did not fulfill criteria for periodontitis
Baltacioğlu 2008	Protein carbonyl levels in serum and gingival crevicular fluid in patients with chronic periodontitis.	Analyte out of scope
Baltacioğlu 2014	Lipid peroxidation levels and total oxidant/antioxidant status in serum and saliva from patients with chronic and	Analyte out of scope

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	aggressive periodontitis. Oxidative stress index: a new biomarker for periodontal disease?	
Baltacioglu 2019	Protein carbonyl levels in serum, saliva and gingival crevicular fluid in patients with chronic and aggressive periodontitis.	Analyte out of scope
Bandrivsky 2019	Indicators of markers of bone metabolism in patients with generalized periodontitis depending on blood group	Did not fulfill criteria for periodontitis
Banihashemrad 2008	Relationship between cholesterol and triglyceride blood values and periodontal parameters in patients of Mashhad health center.	Full text not available/wrong language
Bansal 2014	Comparative evaluation of C-reactive protein in peripheral blood of patients with healthy gingiva, gingivitis and chronic periodontitis: A clinical and particle-enhanced turbidimetric immuno-analysis.	Analyte out of scope
Bansal 2017	Impact of nonsurgical periodontal therapy on total antioxidant capacity in chronic periodontitis patients.	Analyte out of scope
Banu 2015	Correlation of Toll-like receptor 4, interleukin-18, transaminases, and uric acid in patients with chronic periodontitis and healthy adults.	Plasma/whole blood analyzed
Baranowska 1989	A comparison of antibody levels to <i>Bacteroides gingivalis</i> in serum and crevicular fluid from patients with untreated periodontitis.	Full text not available/wrong language
Barnes 2014	Global metabolomic analysis of human saliva and plasma from healthy and diabetic subjects, with and without periodontal disease.	Did not fulfill criteria for periodontitis
Barros 1963	Oral and genetic study of Chileans, 1960-V. Factors that influence the severity of periodontal disease	Full text not available/wrong language
Barros 2013	A cohort study of the impact of tooth loss and periodontal disease on respiratory events among COPD subjects: modulatory role of systemic biomarkers of inflammation.	Other primary disease/condition
Bártová 2000	Th1 and Th2 cytokine profile in patients with early onset periodontitis and their healthy siblings.	Did not fulfill criteria for periodontitis
Baser 2014	Is the severity of periodontitis related to gingival crevicular fluid and serum high-sensitivity C-reactive protein concentrations?	Full text not available/wrong language
Bastos 2012	Lipid peroxidation is associated with the severity of periodontal disease and local inflammatory markers in patients with type 2 diabetes.	Full text not available/wrong language
Basu 2024	The Associations of Cardiometabolic and Dietary Variables with Clinical Periodontitis in Adults with and without Type 2 Diabetes: A Cross-Sectional Study	No periodontally healthy control group
Becerik 2012	Gingival crevicular fluid and plasma acute-phase cytokine levels in different periodontal diseases.	Plasma/whole blood analyzed
Becerik 2017	Gingival crevicular fluid and plasma oxidative stress markers and TGM-2 levels in chronic periodontitis	Analyte out of scope
Beck 2002	Relationships among clinical measures of periodontal disease and their associations with systemic markers.	Did not fulfill criteria for periodontitis
Bedre 2015	Estimation of serum C – Reactive protein levels in patients with and without chronic periodontitis – A preliminary study	Analyte out of scope
Behle 2009	Heterogeneity of systemic inflammatory responses to periodontal therapy.	No periodontally healthy control group
Beikler 1999	Protective effect of serum antibodies against a 110-kilodalton protein of <i>Actinobacillus actinomycetemcomitans</i> following periodontal therapy.	Analyte out of scope
Beikler 2003	Serum antibody reactivity against recombinant PrtC of <i>Porphyromonas gingivalis</i> following periodontal therapy.	Did not fulfill criteria for periodontitis
Bender 2019	Expression of human and <i>Porphyromonas gingivalis</i> glutaminyl cyclases in periodontitis and rheumatoid arthritis-A pilot study.	Analyte out of scope
Benguigui 2012	Evaluation of oral health related to body mass index.	Serum not analyzed
Benjamin 1997	Increased titre and avidity of IgG antibodies to <i>Porphyromonas gingivalis</i> whole cells and a cell surface protein in subjects with adult periodontitis.	Did not fulfill criteria for periodontitis

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Berniyanti 2022	Low Levels of Tumor Necrosis Factor- α will Prevent Periodontitis Exacerbation in Type 2 Diabetes Mellitus.	Other primary disease/condition
Bersole 1980	An ELISA for measuring serum antibodies to <i>Actinobacillus actinomycetemcomitans</i>	Full text not available/wrong language
Bertl 2012	Smoking influences salivary histamine levels in periodontal disease.	Analyte out of scope
Bertl 2013	Non-surgical periodontal therapy influences salivary melatonin levels.	Analyte out of scope
Bhagat 2021	Assessment of Levels of Plasma Oxidative Stress in Patient Having Aggressive Periodontitis before and after Full Mouth Disinfection.	Analyte out of scope
Bhankhar 2017	Effect of nonsurgical periodontal therapy on thyroid stimulating hormone in hypothyroid patients with periodontal diseases	Other primary disease/condition
Bhat 2023	Salivary Fructosamine and Its Association with Interleukin-6 in Prediabetic Patients with and without Chronic Periodontitis: A Cross-sectional Study	Did not fulfill criteria for periodontitis
Bhatsange 2024	Assessment of nutritional status in chronic periodontitis patients: A cross-sectional study	Did not fulfill criteria for periodontitis
Bi 2024	Impact of sleeve gastrectomy on the periodontal status of patients with and without type 2 diabetes: a 1-year prospective real-world study	Other primary disease/condition
Biyikoğlu 2013	Periodontal therapy in chronic periodontitis lowers gingival crevicular fluid interleukin-1beta and DAS28 in rheumatoid arthritis patients.	No periodontally healthy control group
Bizzarro 2007	Periodontitis is characterized by elevated PAI-1 activity.	Plasma/whole blood analyzed
Bizzarro 2010	Association of serum immunoglobulin G (IgG) levels against two periodontal pathogens and prothrombotic state: a clinical pilot study.	Plasma/whole blood analyzed
Bohnstedt 2010	High antibody levels to <i>P. gingivalis</i> in cardiovascular disease.	Other primary disease/condition
Boia 2018	Evaluation of antioxidant capacity and clinical assessment of patients with chronic periodontitis treated with non-surgical periodontal therapy and adjunctive systemic antibiotherapy.	Full text not available/wrong language
Boillot 2015	Periodontal microbiota and phospholipases: The Oral Infections and Vascular Disease Epidemiology Study (INVEST)	Did not fulfill criteria for periodontitis
Bokhari 2012	Non-surgical periodontal therapy reduces coronary heart disease risk markers: a randomized controlled trial.	Other primary disease/condition
Bokor-Bratić 1998	The concentration of immunoglobulins A, G, and M in serum of patients with periodontal disease.	Full text not available/wrong language
Bolla 2017	Evaluation of Serum C-reactive Protein Levels in Subjects with Aggressive and Chronic Periodontitis in Comparison with Healthy Controls: A Clinico-biochemical Study.	Analyte out of scope
Bolyarova-Konova 2020	ACPA in Saliva and their association with periodontitis and rheumatoid arthritis	Other primary disease/condition
Bolyarova-Konova 2022	Anti-cyclic citrullinated peptide antibody and rheumatoid factor and the relationship between periodontitis and rheumatoid arthritis	Did not fulfill criteria for periodontitis
Booth 2006	Serum IgG1 and IgG2 antibody responses to <i>Porphyromonas gingivalis</i> in patients with periodontitis.	Did not fulfill criteria for periodontitis
BorilovaLinhartova 2018	Differences in Interleukin-8 Plasma Levels between Diabetic Patients and Healthy Individuals Independently on Their Periodontal Status.	Plasma/whole blood analyzed
BorilovaLinhartova 2019	Adipokine gene variability and plasma levels in patients with chronic periodontitis -a case-control study.	Plasma/whole blood analyzed
BorilovaLinhartova 2019	Interleukin-1 Gene Variability and Plasma Levels in Czech Patients with Chronic Periodontitis and Diabetes Mellitus.	Plasma/whole blood analyzed
Botelho 2020	Relationship between blood and standard biochemistry levels with periodontitis in parkinson's disease patients: Data from the NHANES 2011–2012	Other primary disease/condition

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Botelho 2021	Periodontal Inflamed Surface Area Mediates the Link between Homocysteine and Blood Pressure.	Analyte out of scope
Botero 2021	Effects of nonsurgical periodontal therapy in patients with rheumatoid arthritis: a prospective before and after study.	Other primary disease/condition
Boyapati 2018	Association of pentraxin and high-sensitive C-reactive protein as inflammatory biomarkers in patients with chronic periodontitis and peripheral arterial disease.	No periodontally healthy control group
Bozoglan 2017	Determining the relationship between atherosclerosis and periodontopathogenic microorganisms in chronic periodontitis patients.	Analyte out of scope
Bretz 2005	Systemic inflammatory markers, periodontal diseases, and periodontal infections in an elderly population.	Did not fulfill criteria for periodontitis
Briggs 2006	Angiographically confirmed coronary heart disease and periodontal disease in middle-aged males.	Other primary disease/condition
Bristow 1998	Specific activity of α 1proteinase inhibitor and α 2macroglobulin in human serum: Application to insulin-dependent diabetes mellitus	Other primary disease/condition
Brown 1975	The association of the IGA levels of serum and whole saliva with the progression of oral cancer.	Did not fulfill criteria for periodontitis
Brun 2021	Oral microbiota and atherothrombotic carotid plaque vulnerability in periodontitis patients. A cross-sectional study.	Other primary disease/condition
Buduneli 2005	Plasminogen activator system in smokers and non-smokers with and without periodontal disease.	Did not fulfill criteria for periodontitis
Buduneli 2011	Acute myocardial infarction is reflected in salivary matrix metalloproteinase-8 activation level.	Did not fulfill criteria for periodontitis
Buduneli 2011	Salivary and Plasma Levels of Toll-Like Receptor 2 and Toll-Like Receptor 4 in Chronic Periodontitis	Plasma/whole blood analyzed
Buduneli 2012	Interleukin-33 levels in gingival crevicular fluid, saliva, or plasma do not differentiate chronic periodontitis.	Plasma/whole blood analyzed
Buduneli 2014	Is obesity a possible modifier of periodontal disease as a chronic inflammatory process? A case-control study.	Other primary disease/condition
Buhlin 2003	Risk factors for cardiovascular disease in patients with periodontitis.	Full text not available/wrong language
Buhlin 2009	Risk factors for atherosclerosis in cases with severe periodontitis.	Plasma/whole blood analyzed
Buhlin 2009	Periodontal treatment influences risk markers for atherosclerosis in patients with severe periodontitis.	No periodontally healthy control group
Buhlin 2015	Association of periodontitis with persistent, pro-atherogenic antibody responses.	Full text not available/wrong language
Bulut 2024	Serum vitamin D, hemoglobin A1c and vitamin B12 levels in patients with gingivitis and periodontitis stages	Full text not available/wrong language
Bunaes 2017	The effect of smoking on inflammatory and bone remodeling markers in gingival crevicular fluid and subgingival microbiota following periodontal therapy.	Analyte out of scope
Bunte 2023	Association of periodontitis with handgrip strength and skeletal muscle mass in middle-aged US adults from NHANES 2013-2014.	Analyte out of scope
Cai 2017	Elevated interleukin (IL)-35-related sCD14 but not IL-23 is associated with the severity of chronic periodontitis	Did not fulfill criteria for periodontitis
Cairo 2009	Periodontal variables may predict sub-clinical atherosclerosis and systemic inflammation in young adults. A cross-sectional study.	Analyte out of scope
Cairo 2010	Markers of systemic inflammation in periodontal patients: chronic versus aggressive periodontitis. An explorative cross-sectional study.	Full text not available/wrong language
Çalapkorur 2017	Association of peripheral arterial disease with periodontal disease: analysis of inflammatory cytokines and an acute phase protein in gingival crevicular fluid and serum.	Other primary disease/condition
Califano 1997	A comparison of IgG antibody reactive with Bacteroides forsythus and Porphyromonas gingivalis in adult and early-onset periodontitis.	Analyte out of scope
Califano 1997	Antibody reactive with Actinobacillus actinomycetemcomitans leukotoxin in early-onset periodontitis patients.	Analyte out of scope

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Califano 1999	Antibody reactive with Porphyromonas gingivalis serotypes K1-6 in adult and generalized early-onset periodontitis.	Analyte out of scope
Caloian 2024	Exploring Periodontal Conditions, Salivary Markers, and Systemic Inflammation in Patients with Cardiovascular Diseases.	Other primary disease/condition
Canakçi 2006	New evidence of premature oxidative DNA damage: mitochondrial DNA deletion in gingival tissue of patients with periodontitis.	Serum not analyzed
Cao 2023	Association between serum HE4 and poor periodontal health in adult women.	Other primary disease/condition
CarballoÁ 2023	Association of periodontitis with cognitive decline and its progression: Contribution of blood-based biomarkers of Alzheimer's disease to this relationship.	Other primary disease/condition
Carda 2006	A structural and functional salivary disorders in type 2 diabetic patients	Other primary disease/condition
Cassiano 2024	Role of circulating microparticles and cytokines in periodontitis associated with diabetes.	No periodontally healthy control group
Caúla 2014	The effect of periodontal therapy on cardiovascular risk markers: A 6-month randomized clinical trial	No periodontally healthy control group
Celenligil 1998	Analysis of serum antibody responses to periodontopathogens in early-onset periodontitis patients from different geographical locations.	Analyte out of scope
Celenligil 1998	Periodontal status and serum antibody responses to oral microorganisms in Sjögren's syndrome.	Other primary disease/condition
Celenligil-Nazliel 1999	Periodontal findings and systemic antibody responses to oral microorganisms in Behçet's disease.	Other primary disease/condition
Cengiz 2009	Periodontal disease in patients with familial Mediterranean fever: from inflammation to amyloidosis.	Other primary disease/condition
Cengiz 2011	Interaction between periodontal disease and systemic secondary amyloidosis: From inflammation to amyloidosis	Did not fulfill criteria for periodontitis
Cestari 2016	Oral Infections and Cytokine Levels in Patients with Alzheimer's Disease and Mild Cognitive Impairment Compared with Controls.	Full text not available/wrong language
Chakravarthy 2022	Evaluation of serum and gingival crevicular fluid levels of Vitamin D binding protein in subjects with clinically healthy periodontium and chronic periodontitis: A clinico bio-chemical study.	Analyte out of scope
Chandy 2017	Evaluation of C-Reactive Protein and Fibrinogen in Patients with Chronic and Aggressive Periodontitis: A Clinico-Biochemical Study.	Analyte out of scope
Chang 2017	Periodontal Pocket Depth, Hyperglycemia, and Progression of Chronic Kidney Disease: A Population-Based Longitudinal Study	Other primary disease/condition
Chang 2020	A Study on the Correlation between C-Reactive Protein Concentration and Teeth with a ≥5 mm Periodontal Pocket in Chronic Periodontitis Patients.	Did not fulfill criteria for periodontitis
Chaston 2014	Serum anticardiolipin concentrations in patients with chronic periodontitis following scaling and root planing.	No periodontally healthy control group
Chaudhry 2022	Potential Effects of Non-Surgical Periodontal Therapy on Periodontal Parameters, Inflammatory Markers, and Kidney Function Indicators in Chronic Kidney Disease Patients with Chronic Periodontitis.	No periodontally healthy control group
Chauhan 2013	Comparative analysis of hyaluronan gel and xanthan-based chlorhexidine gel, as adjunct to scaling and root planing with scaling and root planing alone in the treatment of chronic periodontitis: A preliminary study.	Analyte out of scope
Chauhan 2016	Correlation of Serum and Salivary Cytokines Level With Clinical Parameters in Metabolic Syndrome With Periodontitis.	Did not fulfill criteria for periodontitis
Chavan 2019	Estimation of YKL-40 Acute-Phase Protein in Serum of Patients with Periodontal Disease and Healthy Individuals: A Clinical-Biochemical Study.	Did not fulfill criteria for periodontitis

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Chen 1991	Humoral immune responses to Porphyromonas gingivalis before and following therapy in rapidly progressive periodontitis patients.	Full text not available/wrong language
Chen 1991	Human immunoglobulin G antibody response to iron-repressible and other membrane proteins of Porphyromonas (Bacteroides) gingivalis.	Analyte out of scope
Chen 1995	Immunodominant antigens of Porphyromonas gingivalis in patients with rapidly progressive periodontitis.	Full text not available/wrong language
Chen 1997	Correlation of interleukin-1 beta, interleukin-6, and periodontitis.	Full text not available/wrong language
Chen 1998	Variable serum immunoglobulin G immune response to genetically distinct Eikenella corrodens strains coexisting in the human oral cavity.	Analyte out of scope
Chen 2007	Elevated IgG titers to periodontal pathogens related to Buerger disease.	Analyte out of scope
Chen 2008	Periodontitis may increase the risk of peripheral arterial disease.	Other primary disease/condition
Chen 2009	Association between periodontitis and anti-cardiolipin antibodies in Buerger disease.	Other primary disease/condition
Chen 2015	Cytokine levels in plasma and gingival crevicular fluid in chronic periodontitis.	Full text not available/wrong language
Chen 2016	Metabolic Syndrome and Periodontal Disease Among Civilian Pilots.	Did not fulfill criteria for periodontitis
Chen 2018	Analysis of metabolic profiles of generalized aggressive periodontitis.	Analyte out of scope
Chen 2018	Detection of levels of serum visfatin and PGE2 in patients with periodontitis and their relationships with activity of periodontitis	Full text not available/wrong language
Chen 2020	Effects of xipayi mouth rinse combined with minocycline on localized aggressive periodontitis' therapeutic effect and the levels of CRP, TNF- α , IL-6 in serum.	No periodontally healthy control group
Chen 2022	Serum α -Klotho associated with oral health among a nationally representative sample of US adults	No periodontally healthy control group
Cheng 2021	Clinical Effect and Aesthetic Observation of All-on-4 Immediate Loading Implant Denture in Severe Periodontitis.	Other reason for exclusion
Chila-Moreno 2020	Anti-carbamylated protein and peptide antibodies as potential inflammatory joint biomarkers in the relatives of rheumatoid arthritis patients	Other primary disease/condition
Chitsazi 2008	Association of Periodontal Diseases with Elevation of Serum C-reactive Protein and Body Mass Index.	Did not fulfill criteria for periodontitis
Choi 1990	Clinical, microbiological and immunological studies on recurrent periodontal disease.	Full text not available/wrong language
Choi 2014	Serum C-reactive protein and immunoglobulin G antibodies to periodontal pathogens may be effect modifiers of periodontitis and hyperglycemia.	Did not fulfill criteria for periodontitis
Choi 2016	Periodontitis is associated with rheumatoid arthritis: A study with longstanding rheumatoid arthritis patients in Korea	Other primary disease/condition
Chokwiryachit 2013	Periodontitis and gestational diabetes mellitus in non-smoking females.	Other primary disease/condition
Chopra 2012	Association between alveolar bone loss and serum C-reactive protein levels in aggressive and chronic periodontitis patients.	Analyte out of scope
Chopra 2012	Comparison of cardiovascular disease risk in two main forms of periodontitis.	Full text not available/wrong language
Chung 1986	Antibodies to Actinobacillus actinomycetemcomitans in a Korean population.	Full text not available/wrong language
Chung 2003	Immunoglobulin G profiles in different forms of periodontitis.	Analyte out of scope
Colombo 1998	Serum antibodies reacting with subgingival species in refractory periodontitis subjects.	Analyte out of scope
Colombo 1998	Serum IgG2 level, Gm(23) allotype and Fc γ RIIIa and Fc γ RIIIb receptors in refractory periodontal disease.	Analyte out of scope

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Colombo 1998	Serum IgG2 level, Gm(23) allotype and FcγRIIa and FcγRIIIb receptors in refractory periodontal disease	Analyte out of scope
Colombo 1999	Discrimination of refractory periodontitis subjects using clinical and laboratory parameters alone and in combination.	Did not fulfill criteria for periodontitis
Corbi 2014	Elevated micronucleus frequency in patients with type 2 diabetes, dyslipidemia and periodontitis.	Full text not available/wrong language
Corrêa 2012	Association between polymorphisms in interleukin-17A and -17F genes and chronic periodontal disease.	Other reason for exclusion
CortelaDCB 2018	Inflammatory cytokines in leprosy reactions and periodontal diseases.	Other primary disease/condition
Cortelli 2021	Salivary nitrite and systemic biomarkers in obese individuals with periodontitis submitted to FMD.	No periodontally healthy control group
Cosgarea 2019	Effects of non-surgical periodontal therapy on periodontal laboratory and clinical data as well as on disease activity in patients with rheumatoid arthritis.	Analyte out of scope
Costa 2021	Effect of compliance during periodontal maintenance therapy on c-reactive protein levels: a 6-year follow-up.	Analyte out of scope
Craig 2002	Serum IgG antibody response to periodontal pathogens in minority populations: relationship to periodontal disease status and progression.	Did not fulfill criteria for periodontitis
Craig 2003	Relationship of destructive periodontal disease to the acute-phase response.	Did not fulfill criteria for periodontitis
Cullinan 2015	The influence of triclosan on biomarkers of cardiovascular risk in patients in the Cardiovascular and Periodontal Study (CAPS): A randomized controlled trial	Other primary disease/condition
Cunningham 2014	A bidirectional relationship of oral-systemic responses: observations of systemic host responses in patients after full-mouth extractions.	Did not fulfill criteria for periodontitis
Cutando 2003	Relationship between salivary melatonin levels and periodontal status in diabetic patients.	Other primary disease/condition
Cutando 2014	Effect of topical application of melatonin to the gingiva on salivary osteoprotegerin, RANKL and melatonin levels in patients with diabetes and periodontal disease.	Other primary disease/condition
Cutando 2015	Effect of topical application of melatonin on serum levels of C-reactive protein (CRP), interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF-α) in patients with type 1 or type 2 diabetes and periodontal disease.	Did not fulfill criteria for periodontitis
Cutler 1999	Association between periodontitis and hyperlipidemia: cause or effect?	Did not fulfill criteria for periodontitis
Cutler 1999	Heightened gingival inflammation and attachment loss in type 2 diabetics with hyperlipidemia.	Analyte out of scope
Czesnikiewicz-Guzik 2005	Helicobacter pylori in the oral cavity and its implications for gastric infection, periodontal health, immunology and dyspepsia.	Full text not available/wrong language
Dağ 2009	The effect of periodontal therapy on serum TNF-α and HbA1c levels in type 2 diabetic patients	No periodontally healthy control group
Dağ 2010	Significance of elevated gingival crevicular fluid tumor necrosis factor-α and interleukin-8 levels in chronic hemodialysis patients with periodontal disease	Other primary disease/condition
Dağ 2010	The effect of periodontal therapy on serum CRP, IL-6 levels and periodontal parameters in patients having poorly and well controlled type 2 diabetes with chronic periodontitis: A 3-month evaluation	Full text not available/wrong language
Dağ 2010	Significance of elevated gingival crevicular fluid tumor necrosis factor-alpha and interleukin-8 levels in chronic hemodialysis patients with periodontal disease.	Did not fulfill criteria for periodontitis
Dahash 2020	Level of Plasma Prostaglandin-Endoperoxide Synthase 2 (PTGS2) in Patients with Chronic Periodontitis and its Correlation with Clinical Periodontal Parameters.	Plasma/whole blood analyzed
Daily 2023	MicroRNA-155 (miR-155) as an accurate biomarker of periodontal status and coronary heart disease severity: a case-control study.	Serum not analyzed
Daily 2024	Accuracy of salivary biomarkers in the diagnosis of periodontal status and coronary heart disease.	Analyte out of scope

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D'Aiuto 2004	Gene polymorphisms in pro-inflammatory cytokines are associated with systemic inflammation in patients with severe periodontal infections.	No periodontally healthy control group
D'Aiuto 2004	Periodontal therapy: a novel non-drug-induced experimental model to study human inflammation.	No periodontally healthy control group
D'Aiuto 2004	Periodontal disease and C-reactive protein-associated cardiovascular risk.	No periodontally healthy control group
D'Aiuto 2004	Periodontitis and atherogenesis: causal association or simple coincidence?	No periodontally healthy control group
D'Aiuto 2004	Periodontitis and systemic inflammation: control of the local infection is associated with a reduction in serum inflammatory markers.	No periodontally healthy control group
D'Aiuto 2004	Periodontitis and atherogenesis: Causal association or simple coincidence? A pilot intervention study	No periodontally healthy control group
D'Aiuto 2005	Periodontal therapy: a novel acute inflammatory model.	No periodontally healthy control group
D'Aiuto 2005	Short-term effects of intensive periodontal therapy on serum inflammatory markers and cholesterol.	No periodontally healthy control group
D'Aiuto 2006	Periodontal infections cause changes in traditional and novel cardiovascular risk factors: results from a randomized controlled clinical trial.	No periodontally healthy control group
D'Aiuto 2007	Acute effects of periodontal therapy on bio-markers of vascular health.	No periodontally healthy control group
Dalal 2024	Evaluation of the Circulatory Levels of Heat Shock Protein 60 Levels in Periodontitis and Cardiovascular Disease Patients.	No periodontally healthy control group
Damgaard 2017	Immunoglobulin G antibodies against Porphyromonas gingivalis or Aggregatibacter actinomycetemcomitans in cardiovascular disease and periodontitis	Analyte out of scope
Damgaard 2021	Circulating antibodies against leukotoxin A as marker of periodontitis Grades B and C and oral infection with Aggregatibacter actinomycetemcomitans.	Analyte out of scope
Damgaard 2022	Complement component 3 and its activation split-products in saliva associate with periodontitis	Plasma/whole blood analyzed
Damgaard 2022	Complement component 3 (C3) and its activation split-products in saliva associate with periodontitis	Plasma/whole blood analyzed
Darby 2001	Changes in subgingival microflora and humoral immune response following periodontal therapy.	Did not fulfill criteria for periodontitis
Das 2011	Periodontal treatment needs in diabetic and non-diabetic individuals: a case-control study.	Other primary disease/condition
Das 2024	Biochemical Examination of Plasma Ghrelin Levels in Individuals Afflicted With Chronic Periodontal Disease: A Comparative Study.	Plasma/whole blood analyzed
daSilva 2022	The influence of periodontal status and serum biomarkers on salivary leptin levels in systemic lupus erythematosus patients.	Other primary disease/condition
DaVenezia 2021	Assessment of Cardiovascular Risk in Women with Periodontal Diseases According to C-reactive Protein Levels.	Analyte out of scope
Davison 2021	The Subgingival Plaque Microbiome, Systemic Antibodies Against Bacteria and Citrullinated Proteins Following Periodontal Therapy.	Did not fulfill criteria for periodontitis
Dawson 2009	Real-time polymerase chain reaction to determine the prevalence and copy number of epstein-barr virus and cytomegalovirus DNA in subgingival plaque at individual healthy and periodontal disease sites.	Analyte out of scope
De 2018	Estimation of salivary and serum alkaline phosphatase level as a diagnostic marker in type-2 diabetes mellitus with periodontal health and disease: A clinico-biochemical study.	Did not fulfill criteria for periodontitis
DeFreitas 2011	Effect of non-surgical periodontal therapy on the levels of C-reactive protein: A pilot study	Analyte out of scope
De-Gennaro 2006	Autoantibodies directed to extracellular matrix components in patients with different clinical forms of periodontitis	Analyte out of scope

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Delange 2018	Periodontal disease and its connection to systemic biomarkers of cardiovascular disease in young American Indian/Alaskan natives.	Did not fulfill criteria for periodontitis
Deliargyris 2004	Periodontal disease in patients with acute myocardial infarction: prevalence and contribution to elevated C-reactive protein levels.	Analyte out of scope
Demmer 2010	Periodontal status and A1C change: Longitudinal results from the Study of Health in Pomerania (SHIP)	Did not fulfill criteria for periodontitis
Demmer 2012	Periodontal infection, systemic inflammation, and insulin resistance: results from the continuous National Health and Nutrition Examination Survey (NHANES) 1999-2004.	Did not fulfill criteria for periodontitis
DeNardin 1991	Humoral immunity of older adults with periodontal disease to <i>Porphyromonas gingivalis</i> .	Analyte out of scope
Deng 2023	Curative Effect of Bracketless and Invisible Orthodontic Treatment for Periodontitis and the Influence on Gingival Crevicular Fluid and Serum IL-6, MMP-8 and TNF- α Levels	Did not fulfill criteria for periodontitis
Deng 2024	Curative Effect of Bracketless and Invisible Orthodontic Treatment for Periodontitis and the Influence on Gingival Crevicular Fluid and Serum IL-6, MMP-8 and TNF- α Levels.	Did not fulfill criteria for periodontitis
Dent 2021	Biocultural pathways linking periodontal disease expression to food insecurity, immune dysregulation, and nutrition.	Did not fulfill criteria for periodontitis
Deore 2014	Herbal anti-inflammatory immunomodulators as host modulators in chronic periodontitis patients: a randomised, double-blind, placebo-controlled, clinical trial.	No periodontally healthy control group
Deore 2014	Omega 3 fatty acids as a host modulator in chronic periodontitis patients: a randomised, double-blind, placebo-controlled, clinical trial.	Analyte out of scope
dePablo 2014	The autoantibody repertoire in periodontitis: a role in the induction of autoimmunity to citrullinated proteins in rheumatoid arthritis?	Analyte out of scope
deQueiroz 2008	Inflammation markers in healthy and periodontitis patients: a preliminary data screening.	Did not fulfill criteria for periodontitis
deSouza 2017	Short-term changes on C-reactive protein (CRP) levels after non-surgical periodontal treatment in systemically healthy individuals.	Analyte out of scope
Detzen 2019	Soluble Forms of the Receptor for Advanced Glycation Endproducts (RAGE) in Periodontitis.	Did not fulfill criteria for periodontitis
deVries 2022	Antibodies to <i>Porphyromonas gingivalis</i> Are Increased in Patients with Severe Periodontitis, and Associate with Presence of Specific Autoantibodies and Myocardial Infarction.	Analyte out of scope
Dharuman 2022	Evaluation of Levels of Advanced Oxidative Protein Products in Patients with Polycystic Ovary Syndrome with and without Chronic Periodontitis: A Cross-Sectional Study.	Analyte out of scope
Dhingra 2010	Effect of periodontal therapy on serum c-reactive protein levels	Full text not available/wrong language
Dias 2011	Activation of the neutrophil respiratory burst by plasma from periodontitis patients is mediated by pro-inflammatory cytokines.	Plasma/whole blood analyzed
Díaz 2020	Molecular inflammation and oxidative stress are shared mechanisms involved in both myocardial infarction and periodontitis.	Plasma/whole blood analyzed
Dikshit 2015	Fibrinogen Degradation Products and Periodontitis: Deciphering the Connection.	Analyte out of scope
Dinu 2024	Clinical Study on the Implications of Immunological Markers in the Diagnosis of Periodontitis in People with Diabetes Mellitus.	Plasma/whole blood analyzed
Doğan 2015	Lipoxin A4 and neutrophil/lymphocyte ratio: A possible indicator in achieved systemic risk factors for periodontitis	Did not fulfill criteria for periodontitis

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DooxaNongrum 2022	Analysing adipokine Omentin-1 in periodontal disease and type-2 diabetes mellitus: An interventional comparative study.	No periodontally healthy control group
Doty 1982	Humoral immune response to oral microorganisms in periodontitis.	Did not fulfill criteria for periodontitis
Dravid 2023	SALIVARY ENZYMES AS BIOMARKERS FOR TREATMENT OF PATIENTS WITH PERIODONTITIS: A FOLLOW-UP STUDY	Did not fulfill criteria for periodontitis
Du 2024	Mediating role of systemic inflammation in the association between heavy metals exposure and periodontitis risk.	Analyte out of scope
Duarte 2019	Protein and mRNA detection of classic cytokines in corresponding samples of serum, gingival tissue and gingival crevicular fluid from subjects with periodontitis.	No periodontally healthy control group
Duncan 1992	Porphyromonas gingivalis: Presence of a species-specific antigen which is discriminatory in chronic inflammatory adult periodontal disease	Did not fulfill criteria for periodontitis
Duque 2017	Accuracy of cotinine serum test to detect the smoking habit and its association with periodontal disease in a multicenter study.	Did not fulfill criteria for periodontitis
Duseja 2021	Association between nonalcoholic fatty liver disease and inflammatory periodontal disease: A case-control study	Other primary disease/condition
Dye 2005	Serum antibodies to periodontal pathogens and markers of systemic inflammation.	Did not fulfill criteria for periodontitis
Dye 2009	Serum antibodies to periodontal bacteria as diagnostic markers of periodontitis.	Analyte out of scope
Dyer 1992	Serum antibody responses in human periodontitis to cellular components of Capnocytophaga.	Full text not available/wrong language
Dyer 1997	HLA-D types and serum IgG responses to Capnocytophaga in diabetes and periodontitis.	Analyte out of scope
Eberhard 2014	Moderate and severe periodontitis are independent risk factors associated with low cardiorespiratory fitness in sedentary non-smoking men aged between 45 and 65 years	Analyte out of scope
Ebersole 1982	Human immune responses to oral micro-organisms. I. Association of localized juvenile periodontitis (LJP) with serum antibody responses to Actinobacillus actinomycetemcomitans.	Analyte out of scope
Ebersole 1983	Human immune responses to oral microorganisms. II. Serum antibody responses to antigens from Actinobacillus actinomycetemcomitans and the correlation with localized juvenile periodontitis.	Did not fulfill criteria for periodontitis
Ebersole 1985	Local antibody responses in periodontal diseases.	Full text not available/wrong language
Ebersole 1985	Effect of subgingival scaling on systemic antibody responses to oral microorganisms.	Did not fulfill criteria for periodontitis
Ebersole 1986	Human immune responses to oral microorganisms: patterns of systemic antibody levels to Bacteroides species.	Analyte out of scope
Ebersole 1991	Serum antibody in Actinobacillus actinomycetemcomitans-infected patients with periodontal disease.	Wrong study population/design
Ebersole 1994	Gingival crevicular fluid antibody to Actinobacillus actinomycetemcomitans in periodontal disease.	Full text not available/wrong language
Ebersole 1994	Gingival Crivicular fluid antibody to Actinobacillus actinomycetemcomitans in periodontal disease	Full text not available/wrong language
Ebersole 1995	Human antibody responses to outer envelope antigens of Porphyromonas gingivalis serotypes.	Full text not available/wrong language
Ebersole 1997	Systemic acute-phase reactants, C-reactive protein and haptoglobin, in adult periodontitis.	Analyte out of scope
Ebersole 2000	Antigenic specificity of gingival crevicular fluid antibody to Actinobacillus actinomycetemcomitans.	Analyte out of scope
Ebersole 2002	Periodontitis in humans and non-human primates: oral-systemic linkage inducing acute phase proteins.	Analyte out of scope

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Ebersole 2008	Microbiologic and immunologic characteristics of periodontal disease in Hispanic americans with type 2 diabetes.	Other primary disease/condition
Ebersole 2014	Smoking-related cotinine levels and host responses in chronic periodontitis.	Did not fulfill criteria for periodontitis
Ebersole 2018	Serum nutrient levels and aging effects on periodontitis	Did not fulfill criteria for periodontitis
Ebersole 2020	Heterogeneity of human serum antibody responses to <i>P. gingivalis</i> in periodontitis: Effects of age, race/ethnicity, and sex.	Analyte out of scope
Ebersole 2021	Variations in IgG antibody subclass responses to oral bacteria: Effects of periodontal disease and modifying factors.	Analyte out of scope
Eickholz 2013	Non-surgical periodontal therapy decreases serum elastase levels in aggressive but not in chronic periodontitis.	No periodontally healthy control group
Eickholz 2020	Effect of nonsurgical periodontal therapy on haematological parameters in grades B and C periodontitis: an exploratory analysis.	No periodontally healthy control group
Eickholz 2022	Effect of Subgingival Instrumentation on Neutrophil Elastase and C-Reactive Protein in Grade B and C Periodontitis: Exploratory Analysis of a Prospective Cohort Study.	No periodontally healthy control group
Elabdeen 2013	Ratio of pro-resolving and pro-inflammatory lipid mediator precursors as potential markers for aggressive periodontitis.	Wrong study population/design
Elazazy 2021	Evaluation of serum and gingival crevicular fluid microRNA-223, microRNA-203 and microRNA-200b expression in chronic periodontitis patients with and without diabetes type 2.	Analyte out of scope
El-Beshbishy 2014	Biochemical and C-reactive protein alterations in myocardial infarction periodontitis patients.	Did not fulfill criteria for periodontitis
ElFadl 2011	Periodontitis and cardiovascular disease: Floss and reduce a potential risk factor for CVD.	Other reason for exclusion
Elfasakhany 2020	Assessment of interleukin-33 gene variants and protein level in periodontal disease among saudi population	Plasma/whole blood analyzed
Elter 2006	The effects of periodontal therapy on vascular endothelial function: a pilot trial.	No periodontally healthy control group
Engebretson 2004	Gingival crevicular fluid levels of interleukin-1 β and glycemic control in patients with chronic periodontitis and type 2 diabetes	No periodontally healthy control group
Engström 1999	Oral and systemic immunoglobulin G-subclass antibodies to <i>Actinobacillus actinomycetemcomitans</i> leukotoxin.	No periodontally healthy control group
Ertugrul 2017	The effect of nonsurgical periodontal treatment on serum and gingival crevicular fluid markers in patients with atherosclerosis.	No periodontally healthy control group
Esberg 2021	Serum proteins associated with periodontitis relapse post-surgery: A pilot study.	No periodontally healthy control group
Escobar 2018	Levels of Pro and Anti-inflammatory Citokynes and C-Reactive Protein in Patients with Chronic Periodontitis Submitted to Nonsurgical Periodontal Treatment.	Other reason for exclusion
Eslami 2019	Comparing the levels of gingival crevicular fluid prostaglandin e2 in generalized chronic periodontitis between healthy and type 2 diabetes patients: A case-control study	Full text not available/wrong language
Esteves-Lima 2020	Association between periodontitis and serum c-reactive protein levels.	Analyte out of scope
Falasca 2008	Periodontitis and cytokine patterns in HIV positive patients.	Did not fulfill criteria for periodontitis
Faramarzi 2021	The effect of adjunctive use of melatonin as a supplement on serum ferritin level in periodontal patients: A randomized, controlled trial.	No periodontally healthy control group
Farida 1986	Serum IgG antibodies to lipopolysaccharides in various forms of periodontal disease in man.	Full text not available/wrong language
Farida 1986	Serological investigation of various forms of inflammatory periodontitis	Full text not available/wrong language

SUPPLEMENTARY DATA

Fastovets 2020	Evaluation of bone resorptive potential in the treatment of generalized periodontitis.	Full text not available/wrong language
Fayiza 2023	Comparative analysis of sulfiredoxin and total oxidative stress levels in diabetic individuals with periodontitis: A case-control study	Analyte out of scope
Fazal 2022	Effectiveness of periodontal intervention on the levels of N-terminal pro-brain natriuretic peptide in chronic periodontitis patients.	Did not fulfill criteria for periodontitis
Fenol 2017	Correlation of salivary neopterin and plasma fibrinogen levels in patients with chronic periodontitis and/or type 2 diabetes mellitus	Analyte out of scope
Fentoğlu 2010	Short-term effects of periodontal therapy as an adjunct to anti-lipemic treatment.	Other primary disease/condition
Fentoğlu 2011	Serum lipoprotein-associated phospholipase A2 and c-reactive protein levels in association with periodontal disease and hyperlipidemia	Analyte out of scope
Fentoğlu 2011	Serum lipoprotein-associated phospholipase A2 and C-reactive protein levels in association with periodontal disease and hyperlipidemia.	Analyte out of scope
Fentoğlu 2012	Proinflammatory cytokine levels in hyperlipidemic patients with periodontitis after periodontal treatment.	No periodontally healthy control group
Fentoğlu 2020	Is the relationship between periodontitis and hyperlipidemia mediated by lipoprotein-associated inflammatory mediators?	Analyte out of scope
Fentoglu 2022	Plasminogen gene polymorphisms [c.924C>T and IVS 8+14 G>A] in periodontitis and familial Mediterranean fever: A case-control study	Other primary disease/condition
Fentoğlu 2015	Serum Lp-PLA2: as a novel viewpoint in periodontal treatment of hyperlipidaemics.	Analyte out of scope
Fentoğlu 2017	R202Q/M694V as novel MEFV gene mutations in chronic periodontitis and familial Mediterranean fever.	Analyte out of scope
Fentoğlu 2022	Plasminogen gene polymorphisms [c.924C>T and IVS 8+14 G>A] in periodontitis and familial Mediterranean fever: A case-control study.	Other primary disease/condition
Fentoğlu 2015	Evaluation of lipid peroxidation and oxidative DNA damage in patients with periodontitis and hyperlipidemia	Analyte out of scope
Ferlazzo 2021	Changes in the Biomarkers of Oxidative/Nitrosative Stress and Endothelial Dysfunction Are Associated with Cardiovascular Risk in Periodontitis Patients.	Did not fulfill criteria for periodontitis
Fernandes 2016	Salivary Immunoglobulins in Individuals with Common Variable Immunodeficiency.	Other primary disease/condition
Figueredo 2011	Expression of cytokines in the gingival crevicular fluid and serum from patients with inflammatory bowel disease and untreated chronic periodontitis.	No periodontally healthy control group
Figueredo 2013	Serum levels of long-chain polyunsaturated fatty acids in patients with periodontal disease	Full text not available/wrong language
Fisher 2008	Clinical and serologic markers of periodontal infection and chronic kidney disease.	Other primary disease/condition
Fleming 1996	Specific antibody reactivity against a 110-kilodalton Actinobacillus actinomycetemcomitans protein in subjects with periodontitis.	Analyte out of scope
Fokkema 1998	A possible association of α 1-antitrypsin deficiency with the periodontal condition in adults	Other primary disease/condition
Forner 2006	Increased plasma levels of IL-6 in bacteremic periodontitis patients after scaling.	No periodontally healthy control group
Franca 2007	Humoral immune response to antigens of Porphyromonas gingivalis ATCC 33277 in chronic periodontitis.	Analyte out of scope
Fredriksson 1999	Effect of periodontitis and smoking on blood leukocytes and acute-phase proteins.	Analyte out of scope
Fredriksson 2003	Constitutionally hyperreactive neutrophils in periodontitis.	Plasma/whole blood analyzed
Freeland 1976	Relationship of mineral status and intake to periodontal disease.	Full text not available/wrong language
Ftis 1986	Antibody to collagen type I in periodontal disease.	Full text not available/wrong language

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Fu 2023	Oral microbiome and serological analyses on association of Alzheimer's disease and periodontitis.	Other primary disease/condition
Fujii 2023	Associations between Periodontal Status and Liver Function in the Japanese Population: A Cross-Sectional Study	Did not fulfill criteria for periodontitis
Furugen 2008	The relationship between periodontal condition and serum levels of resistin and adiponectin in elderly Japanese.	Did not fulfill criteria for periodontitis
Furugen 2018	Association of the Serum IGG level against periodontal bacteria with periodontal status and serum lipid levels	Analyte out of scope
Furuichi 2001	Periodontal status and serum antibody titers for Porphyromonas gingivalis fimbriae in a rural population in Japan.	Did not fulfill criteria for periodontitis
Furuichi 2003	Associations of periodontal status with general health conditions and serum antibody titers for Porphyromonas gingivalis and Actinobacillus actinomycetemcomitans.	Did not fulfill criteria for periodontitis
Furuta 2015	Gender-specific associations of serum antibody to Porphyromonas gingivalis and inflammatory markers.	Did not fulfill criteria for periodontitis
Gaddale 2016	Changes in cellular and molecular components of peripheral blood in patients with generalized aggressive periodontitis.	Analyte out of scope
Gadekar 2018	Detection of antibodies against Aggregatibacter actinomycetemcomitans in serum and saliva through ELISA in periodontally healthy individuals and individuals with chronic periodontitis.	Analyte out of scope
Gainet 1998	Interleukin-8 production by polymorphonuclear neutrophils in patients with rapidly progressive periodontitis: an amplifying loop of polymorphonuclear neutrophil activation.	Full text not available/wrong language
Gainet 1999	Neutrophil dysfunctions, IL-8, and soluble L-selectin plasma levels in rapidly progressive versus adult and localized juvenile periodontitis: variations according to disease severity and microbial flora.	Did not fulfill criteria for periodontitis
Gajjar 2023	Effect of serum ferritin levels in gingivitis and periodontitis patients before and after nonsurgical periodontal therapeutic intervention	Analyte out of scope
Gamsiz-Isik 2017	Does Obstructive Sleep Apnea Increase the Risk for Periodontal Disease? A Case-Control Study.	Other primary disease/condition
Gangadhar 2011	Correlation between leptin and the health of the gingiva: a predictor of medical risk.	Did not fulfill criteria for periodontitis
Ganganna 2020	Serum migration inhibitory factor levels in periodontal health and disease, its correlation with clinical parameters.	Did not fulfill criteria for periodontitis
Gani 2009	Evaluation of C-reactive protein and interleukin-6 in the peripheral blood of patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Gani 2012	Estimation of the levels of C-reactive protein, interleukin-6, total leukocyte count, and differential count in peripheral blood smear of patients with chronic periodontitis in a South Indian population.	Did not fulfill criteria for periodontitis
Ganowicz 2010	Periodontal diseases as a factor modifying the correlation between other risk factors and left ventricular hypertrophy	Full text not available/wrong language
Gao 2015	Associations of apolipoprotein E and low-density lipoprotein receptor-related protein 5 polymorphisms with dyslipidemia and generalized aggressive periodontitis in a Chinese population.	Analyte out of scope
Gao 2018	Relationship between moderate-severe periodontitis and ischemic stroke	Full text not available/wrong language
García-Parra 2022	Quantification of Osteoprotegerin Plasma Levels in Patients with Periodontitis.	Plasma/whole blood analyzed
Gautam 2022	Evaluation of the effect of nonsurgical periodontal therapy on malondialdehyde and 8-hydroxy deoxyguanosine levels in chronic periodontitis.	Did not fulfill criteria for periodontitis
Gd 2023	Effects of Non-surgical Periodontal Therapy on Saliva and Gingival Crevicular Fluid Levels of Chemerin in	Analyte out of scope

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	Periodontitis Subjects With and Without Type 2 Diabetes Mellitus.	
Genco 1985	Serum and gingival fluid antibodies as adjuncts in the diagnosis of Actinobacillus actinomycetemcomitans-associated periodontal disease.	Full text not available/wrong language
Genco 2005	A proposed model linking inflammation to obesity, diabetes, and periodontal infections.	Other primary disease/condition
Genco 2005	A Proposed Model Linking Inflammation to Obesity, Diabetes, and Periodontal Infections.	Plasma/whole blood analyzed
Geng 2018	Interleukin-10 polymorphisms affect the key periodontal pathogens in Chinese periodontitis patients.	Other reason for exclusion
Gerin 2023	Glycemic and Insulin Status in Periodontitis Patients using the Homeostasis Model Assessment (HOMA): A Pilot Study.	Analyte out of scope
Ghafouri-Fard 2022	Altered expression of SOCS genes periodontitis.	Serum not analyzed
Ghalaut 2013	Glycohemoglobin levels with severity of periodontitis in non-diabetic population.	Full text not available/wrong language
Ghalwash 2022	Assessment of Serum and Gingival Crevicular Fluid Level of Fibroblast Growth Factor 23 in Patients Having Diseased Periodontium with and without End-Stage Renal Disease: A Cross-Sectional Analytical Study	Did not fulfill criteria for periodontitis
Gharbi 2019	Biochemical parameters and oxidative stress markers in Tunisian patients with periodontal disease	Did not fulfill criteria for periodontitis
Gholami 2020	The lncRNA ANRIL is down-regulated in peripheral blood of patients with periodontitis: Long Non-Coding RNA and periodontitis	Serum not analyzed
Gholami 2021	Expression of apoptosome-related genes in periodontitis	Serum not analyzed
Giannopoulou 2016	Systemic Biomarkers in 2-Phase Antibiotic Periodontal Treatment: A Randomized Clinical Trial.	Did not fulfill criteria for periodontitis
Giannopoulou 2016	Systemic Biomarkers in 2-Phase Antibiotic Periodontal Treatment	No periodontally healthy control group
GibsonIII 2005	Gingipain-specific IgG in the sera of patients with periodontal disease is necessary for opsonophagocytosis of Porphyromonas gingivalis	Analyte out of scope
Gil-Montoya 2017	Association between periodontitis and amyloid β peptide in elderly people with and without cognitive impairment	Other primary disease/condition
Gita 2012	Are lipid profiles true surrogate biomarkers of coronary heart disease in periodontitis patients?: A case-control study in a south Indian population.	Did not fulfill criteria for periodontitis
Gittaboyina 2017	Estimation of Pentraxin 3 and Porphyromonas Gingivalis Levels in Patients with Rheumatoid Arthritis and Periodontitis- An Observational Study	Analyte out of scope
Glas 2008	Increased plasma concentration of surfactant protein D in chronic periodontitis independent of SFTPD genotype: potential role as a biomarker.	Plasma/whole blood analyzed
Glurich 2002	Systemic inflammation in cardiovascular and periodontal disease: comparative study.	Did not fulfill criteria for periodontitis
Gmür 1986	Double-blind analysis of the relation between adult periodontitis and systemic host response to suspected periodontal pathogens.	Did not fulfill criteria for periodontitis
Gmür 1997	Serum immunoglobulin G responses to various Actinobacillus actinomycetemcomitans serotypes in a young ethnographically heterogeneous periodontitis patient group.	Analyte out of scope
Gocke 2014	Abdominal obesity modifies long-term associations between periodontitis and markers of systemic inflammation	Other primary disease/condition
Gokhale 2010	Evaluation of blood parameters in patients with chronic periodontitis for signs of anemia	Analyte out of scope
Gokhale 2014	Resistin levels in gingival crevicular fluid of patients with chronic periodontitis and type 2 diabetes mellitus.	Analyte out of scope
Gokul 2012	Estimation of the level of tumor necrosis factor- in gingival crevicular fluid and serum in periodontal health and disease: A biochemical study	Did not fulfill criteria for periodontitis

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Goldobin 2017	Immune disorders at the system and local levels at chronic periodontitis, interactions with oxidant exchanges	Full text not available/wrong language
Golubović 2003	Salivary carcinoembryonic antigen as an inflammatory marker	Did not fulfill criteria for periodontitis
Gomaa 2017	How does the social "get under the gums"? The role of socio-economic position in the oral-systemic health link.	Did not fulfill criteria for periodontitis
Gomes-Filho 2011	Chronic periodontitis and C-reactive protein levels.	Analyte out of scope
Gómez-Moreno 2007	Melatonin expression in periodontal disease	Did not fulfill criteria for periodontitis
Gonçalves 2015	Local and serum levels of adipokines in patients with obesity after periodontal therapy: one-year follow-up.	No periodontally healthy control group
Gonçalves 2015	Effects of scaling and root planing on clinical response and serum levels of adipocytokines in patients with obesity and chronic periodontitis.	No periodontally healthy control group
GonçalvesLda 2010	Comparative proteomic analysis of whole saliva from chronic periodontitis patients.	Serum not analyzed
Gonzales 2011	A novel approach to the use of subgingival controlled-release chlorhexidine delivery in chronic periodontitis: a randomized clinical trial.	Did not fulfill criteria for periodontitis
Gonzales 2014	T helper cells from aggressive periodontitis patients produce higher levels of interleukin-1 beta and interleukin-6 in interaction with Porphyromonas gingivalis.	Analyte out of scope
Gonzalez 2015	Alveolar bone loss is associated with circulating anti-citrullinated protein antibody (ACPA) in patients with rheumatoid arthritis.	Other primary disease/condition
González 2021	Is C Reactive Protein a Risk Indicator for Periodontal Disease?	Full text not available/wrong language
Gorgun 2021	IL-13 gene polymorphisms (-1112 C/T and -1512 A/C) in patients with chronic and aggressive periodontitis: Effects on GCF and outcome of periodontal therapy.	Serum not analyzed
Górska 2003	Relationship between clinical parameters and cytokine profiles in inflamed gingival tissue and serum samples from patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Górska 2006	The effects of the initial treatment phase and of adjunctive low-dose doxycycline therapy on clinical parameters and MMP-8, MMP-9, and TIMP-1 levels in the saliva and peripheral blood of patients with chronic periodontitis.	No periodontally healthy control group
Górski 2016	The Association Between Dental Status and Systemic Lipid Profile and Inflammatory Mediators in Patients After Myocardial Infarction.	Other primary disease/condition
Govindaraj 2021	Evaluation of Resistin Levels in Gingival Crevicular Fluid in Diabetic Patients with And without Chronic Periodontitis	Analyte out of scope
Goyal 2014	Comparative evaluation of serum C-reactive protein levels in chronic and aggressive periodontitis patients and association with periodontal disease severity.	Analyte out of scope
Goyal 2015	Comparative evaluation of serum C-reactive protein levels in chronic and aggressive periodontitis patients and association with periodontal disease severity	Analyte out of scope
Graswinckel 2004	Plasma antibody levels in periodontitis patients and controls.	Analyte out of scope
Graziani 2010	Systemic inflammation following non-surgical and surgical periodontal therapy.	Analyte out of scope
Graziani 2010	Effects of non-surgical periodontal therapy on the glomerular filtration rate of the kidney: an exploratory trial.	Did not fulfill criteria for periodontitis
Graziani 2015	Acute-phase response following full-mouth versus quadrant non-surgical periodontal treatment: A randomized clinical trial.	No periodontally healthy control group
Graziani 2018	The effect of twice daily kiwifruit consumption on periodontal and systemic conditions before and after treatment: A randomized clinical trial.	Analyte out of scope

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Graziani 2019	Enamel matrix derivative stabilizes blood clot and improves clinical healing in deep pockets after flapless periodontal therapy: A Randomized Clinical Trial.	No periodontally healthy control group
Graziani 2020	Local application of enamel matrix derivative prevents acute systemic inflammation after periodontal regenerative surgery: A randomized controlled clinical trial.	Did not fulfill criteria for periodontitis
Groenewegen 2024	Association of periodontitis with cardiometabolic and haemostatic parameters.	No periodontally healthy control group
Guan 2023	Glucose and lipid metabolism indexes and blood inflammatory biomarkers of patients with severe periodontitis: A cross-sectional study.	Analyte out of scope
Guangtao 2019	Effects of minocycline hydrochloride ointment combined with tinidazole on serum CRP, TNF- α and SICAM-1 in patients with chronic periodontitis	Full text not available/wrong language
Gulfishan 2024	Comparative evaluation of serum and gingival crevicular fluid levels of interleukin 21 in periodontally diseased and healthy patients.	Did not fulfill criteria for periodontitis
Gunsolley 1987	Relationship of serum antibody to attachment level patterns in young adults with juvenile periodontitis or generalized severe periodontitis.	Full text not available/wrong language
Gunsolley 1990	Serum antibodies to periodontal bacteria.	Full text not available/wrong language
Gunsolley 1997	The effect of race, smoking and immunoglobulin allotypes on IgG subclass concentrations.	Analyte out of scope
Guo 2000	Antibody responses against Porphyromonas gingivalis infection in patients with early-onset periodontitis.	Analyte out of scope
Guo 2017	Associations of Salivary BPIFA1 Protein in Chronic Periodontitis Patients with Type 2 Diabetes Mellitus.	Analyte out of scope
Guo 2017	Effects of nonsurgical periodontal therapy on serum inflammatory factor levels in patients with chronic kidney disease and periodontitis	No periodontally healthy control group
Gupta 2013	Role of monocyte chemoattractant protein-1 (MCP-1) as an immune-diagnostic biomarker in the pathogenesis of chronic periodontal disease.	Other reason for exclusion
Gupta 2015	Effect of Surgical Periodontal Therapy on Serum C-reactive Protein Levels Using ELISA in Both Chronic and Aggressive Periodontitis Patient.	Wrong study population/design
Gupta 2017	C-reactive Protein in Periodontitis and its Comparison with Body Mass Index and Smoking Behaviour.	Did not fulfill criteria for periodontitis
Gupta 2020	Comparative evaluation of role of hs C -reactive protein as a diagnostic marker in chronic periodontitis patients.	Did not fulfill criteria for periodontitis
Gupta 2022	Estimation of Monocyte Chemoattractant Protein-1 (MCP-1) Levels as an Inflammatory Cytokine in Chronic Generalized Periodontitis Patients	Full text not available/wrong language
Gupta 2024	To evaluate the relationship of obstructive sleep apnea with chronic periodontitis and its association with coronary artery disease by assessing serum tumor necrosis factor- α	No periodontally healthy control group
Gurbuz 2024	Oxidative Stress and FOXO-1 Relationship in Stage III Periodontitis	Analyte out of scope
Gursoy 2016	Associations Between Salivary Bone Metabolism Markers and Periodontal Breakdown.	Did not fulfill criteria for periodontitis
Guru 2023	Impact of scaling and root planing on salivary and serum plasminogen activator inhibitor-1 expression in patients with periodontitis with and without type 2 diabetes mellitus.	No periodontally healthy control group
Guruprasad 2018	Interleukin-34 Levels in Gingival Crevicular Fluid and Plasma in Healthy and Diseased Periodontal Tissue in Presence or Absence of Obesity: A Clinico-biochemical Study.	Plasma/whole blood analyzed
Guruprasad 2018	Effect of nonsurgical periodontal therapy on interleukin-34 levels in periodontal health and disease.	Plasma/whole blood analyzed
Guruprasad 2018	Interleukin-34 levels in gingival crevicular fluid and plasma in periodontal health and disease with and without type-2 diabetes mellitus.	Did not fulfill criteria for periodontitis

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Gutiérrez 2000	Analysis by ELISA of antibodies against <i>Fusobacterium nucleatum</i> and <i>Eikenella corrodens</i> in individuals with periodontal disease	Full text not available/wrong language
Gümüş 2013	Gingival crevicular fluid and serum levels of APRIL, BAFF and TNF-alpha in rheumatoid arthritis and osteoporosis patients with periodontal disease.	Did not fulfill criteria for periodontitis
Gümüş 2013	Gingival crevicular fluid, serum levels of receptor activator of nuclear factor- κ B ligand, osteoprotegerin, and interleukin-17 in patients with rheumatoid arthritis and osteoporosis and with periodontal disease.	Did not fulfill criteria for periodontitis
Gümüş 2013	Gingival crevicular fluid, serum levels of receptor activator of nuclear factor-kb ligand, osteoprotegerin, and interleukin-17 in patients with rheumatoid arthritis and osteoporosis and with periodontal disease	Did not fulfill criteria for periodontitis
Gümüş 2014	Saliva and serum levels of pentraxin-3 and interleukin-1 β in generalized aggressive or chronic periodontitis.	Serum not analyzed
Gümüş 2017	Saliva, Serum Levels of Interleukin-21, -33 and Prostaglandin E2 in Patients with Generalised Aggressive or Chronic Periodontitis.	Other reason for exclusion
Güvenç 2023	Periodontal and cardiovascular therapies modify specialized pro-resolving lipid mediator (sPRLM) (LPXA4, PD1, RvE1, RvD1, and MaR1)-mediated pathway: the first pilot clinical study.	Other primary disease/condition
Haba 2011	Evaluation of serum and gingival crevicular fluid C-reactive protein and IL-6 levels in patients with periodontitis and transient ischemic attacks.	Did not fulfill criteria for periodontitis
Haffajee 1988	Clinical, microbiological and immunological features of subjects with refractory periodontal diseases.	Full text not available/wrong language
Haffajee 1988	Clinical, microbiological and immunological features of subjects with destructive periodontal diseases.	Full text not available/wrong language
Haffajee 1995	Patterns of antibody response in subjects with periodontitis.	Full text not available/wrong language
Haidash 2019	Activity of matrix metalloproteinases and their tissue inhibitors in serum in chronic granulating periodontitis	Full text not available/wrong language
Hakobyan 2022	Correlation of level bone metabolism biomarker osteocalcin in serum with periodontal treatment outcome	Did not fulfill criteria for periodontitis
Hall 2012	Levels of serum immunoglobulin G specific to bacterial surface protein A of <i>Tannerella forsythia</i> are related to periodontal status.	Other primary disease/condition
Han 2012	Group of serum inflammatory markers and periodontitis-metabolic syndrome coexistence in Koreans.	Did not fulfill criteria for periodontitis
Hao 2013	Application of interleukin-1 genes and proteins to monitor the status of chronic periodontitis	Plasma/whole blood analyzed
Harb 2012	Association between the insulin-like growth factor axis in serum and periodontitis in the Study of Health in Pomerania: an exploratory study.	Other primary disease/condition
Haririan 2012	Salivary and serum chromogranin A and α -amylase in periodontal health and disease.	Analyte out of scope
Haririan 2018	Salivary neuropeptides, stress, and periodontitis.	Analyte out of scope
Haro 2012	Serum lipids modify periodontal infection - C-reactive protein association.	Other primary disease/condition
Haro 2017	Serum lipids modify periodontal infection - interleukin-6 association.	Did not fulfill criteria for periodontitis
Harpenau 2011	Effects of nutritional supplementation on periodontal parameters, carotenoid antioxidant levels, and serum C-reactive protein.	Did not fulfill criteria for periodontitis
Harshavardhana 2013	Evaluation of serum ceruloplasmin in aggressive and chronic periodontitis patients	Analyte out of scope
Hasegawa 2003	Association between systemic status, periodontal status, serum cytokine levels, and delivery outcomes in pregnant women with a diagnosis of threatened premature labor	Other primary disease/condition
Hasturk 2021	Use of amnion-derived cellular cytokine solution for the treatment of gingivitis: A 2-week safety, dose-ranging, proof-of-principle randomized trial.	Did not fulfill criteria for periodontitis

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Hatem 2020	Evaluation of Interleukin IL-1 β , TNF- α , and VDB Protein Levels in Serum of Patients with Chronic Periodontitis	Did not fulfill criteria for periodontitis
Havemose-Poulsen 2005	Cytokine profiles in peripheral blood and whole blood cell cultures associated with aggressive periodontitis, juvenile idiopathic arthritis, and rheumatoid arthritis.	Plasma/whole blood analyzed
Havemose-Poulsen 2006	Periodontal and hematological characteristics associated with aggressive periodontitis, juvenile idiopathic arthritis, and rheumatoid arthritis.	Analyte out of scope
Havemose-Poulsen 2007	Polymorphisms within the IL-1 gene cluster: effects on cytokine profiles in peripheral blood and whole blood cell cultures of patients with aggressive periodontitis, juvenile idiopathic arthritis, and rheumatoid arthritis.	Plasma/whole blood analyzed
Hayashida 2009	Circulating TNF- α and Oral Health Condition in Elderly Japanese	Did not fulfill criteria for periodontitis
Hayman 2011	Smoking and periodontal disease: discrimination of antibody responses to pathogenic and commensal oral bacteria.	Did not fulfill criteria for periodontitis
Hegde 2019	Obesity and its association with chronic periodontitis: A cross-sectional study.	No periodontally healthy control group
Hendek 2015	Effect of initial periodontal therapy on oxidative stress markers in gingival crevicular fluid, saliva, and serum in smokers and non-smokers with chronic periodontitis.	Analyte out of scope
Hendler 2010	Involvement of autoimmunity in the pathogenesis of aggressive periodontitis	Analyte out of scope
Heneberk 2022	Neopterin Levels in Periodontitis and after Nonsurgical Periodontal Therapy: Evaluation of Gingival Crevicular Fluid, Oral Fluid, Serum and Urinary Samples-A Case-Control Study.	Analyte out of scope
Higashi 2008	Periodontal infection is associated with endothelial dysfunction in healthy subjects and hypertensive patients.	Did not fulfill criteria for periodontitis
Hirai 2013	Serum antibody response to group II chaperonin from <i>Methanobrevibacter oralis</i> and human chaperonin CCT.	Analyte out of scope
Hiroshima 2012	Resistin in gingival crevicular fluid and induction of resistin release by <i>Porphyromonas gingivalis</i> lipopolysaccharide in human neutrophils.	Did not fulfill criteria for periodontitis
Hirsch 1988	Autoimmunity to collagen in adult periodontal disease.	Full text not available/wrong language
Ho 2021	Local and Systemic Expression Profile of IL-10, IL-17, IL-27, IL-35, and IL-37 in Periodontal Diseases: A Cross-sectional Study.	Plasma/whole blood analyzed
Holmer 2018	Improved General and Oral Health in Diabetic Patients by an Okinawan-Based Nordic Diet: A Pilot Study.	Other primary disease/condition
Holmlund 2011	<i>Porphyromonas gingivalis</i> (Pg) a possible link between impaired oral health and acute myocardial infarction.	Other primary disease/condition
Hong 2017	Association between Cockroach-specific Immunoglobulin E and periodontitis in Korean male adults Based on Korean National Health and Nutrition Examination Survey.	Did not fulfill criteria for periodontitis
Honma 2008	Lower antibody response to <i>Porphyromonas gingivalis</i> associated with immunoglobulin G Fc γ receptor IIB polymorphism.	Analyte out of scope
Honma 2008	Lower antibody response to <i>porphyromonas gingivalis</i> associated with immunoglobulin G Fc γ receptor IIB polymorphism	Analyte out of scope
Horibe 1995	Effect of periodontal treatments on serum IgG antibody titers against periodontopathic bacteria.	Full text not available/wrong language
Hosaka 1994	Effect of initial therapy on dynamics of immunogloblin G levels to some periodontopathic bacteria in serum and gingival crevicular fluid.	Full text not available/wrong language
Hu 2019	Long-term clinical effect of non-surgical treatment in GAgP patients and changes of blood indicators	Full text not available/wrong language
Hu 2022	Effect of Vitapex Combined with AH-Plus Paste on Inflammation in Middle-Aged and Elderly Patients with Periodontal-Endodontic Disease	Did not fulfill criteria for periodontitis

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Hu 2023	Comparative analysis of serum and saliva samples using Raman spectroscopy: a high-throughput investigation in patients with polycystic ovary syndrome and periodontitis.	Other primary disease/condition
Huang 2007	Measurements of IL-8 in gingival crevicular fluid and in serum from patients with gingivitis and periodontitis and study of its correlation with clinical indexes	Full text not available/wrong language
Huang 2014	Mass spectrometry-based metabolomic profiling identifies alterations in salivary redox status and fatty acid metabolism in response to inflammation and oxidative stress in periodontal disease	Analyte out of scope
HussainBokhari 2009	Non-surgical periodontal therapy lowers serum inflammatory markers: a pilot study.	Other primary disease/condition
Hussein 2020	Assessment of serum advanced glycation end-product level and its effect on periodontal health status in type 2 diabetic patients with chronic periodontitis	Analyte out of scope
Hwang 2014	Serum antibody responses to periodontal microbiota in chronic and aggressive periodontitis: a postulate revisited.	Analyte out of scope
Ibra 2021	Biological Therapy for Patients With Rheumatoid Arthritis and Its Effect on Periodontal and Immunological Parameters	Full text not available/wrong language
Ibraheem 2019	The effects of cigarette smoke on serum immunoglobulin levels of patient with chronic periodontitis (Comparative study)	No periodontally healthy control group
Ide 2003	Effect of treatment of chronic periodontitis on levels of serum markers of acute-phase inflammatory and vascular responses.	No periodontally healthy control group
Ide 2004	The short-term effects of treatment of chronic periodontitis on circulating levels of endotoxin, C-reactive protein, tumor necrosis factor-alpha, and interleukin-6.	Did not fulfill criteria for periodontitis
Ide 2004	The short-term effects of treatment of chronic periodontitis on circulating levels of endotoxin, c-reactive protein, tumor necrosis factor- α , and interleukin-6	No periodontally healthy control group
Ikezawa 2005	Imbalance between soluble tumour necrosis factor receptors type 1 and 2 in chronic periodontitis.	Did not fulfill criteria for periodontitis
Ikezawa-Suzuki 2008	Effects of treatment on soluble tumour necrosis factor receptor type 1 and 2 in chronic periodontitis.	Did not fulfill criteria for periodontitis
Ilango 2023	Association of pentraxin in periodontitis patients with coronary artery disease.	Analyte out of scope
Ilango 2024	Evidence linking the association of periodontal viruses and pentraxins in periodontitis patients with coronary artery disease.	Analyte out of scope
Inagaki 2003	Antibody responses of periodontitis patients to gingipains of <i>Porphyromonas gingivalis</i>	Analyte out of scope
Inanc 2021	Elevated serum TREM-1 is associated with periodontitis and disease activity in rheumatoid arthritis.	Other primary disease/condition
Inoue 2024	Periodontal tissue susceptibility to glycaemic control in type 2 diabetes	Other primary disease/condition
Ioannidou 2006	Elevated serum interleukin-6 (IL-6) in solid-organ transplant recipients is positively associated with tissue destruction and IL-6 gene expression in the periodontium.	Other primary disease/condition
Ioannidou 2011	Periodontitis predicts elevated C-reactive protein levels in chronic kidney disease.	Other primary disease/condition
Iqbal 2015	Assessment of Systemic Inflammatory Markers in Patients with Aggressive Periodontitis.	Wrong study population/design
Irhayyim 2020	Evaluation of some blood parameters in anemic patients in relation to periodontal condition	Analyte out of scope
Ishida 2012	Interleukin-6 gene promoter methylation in rheumatoid arthritis and chronic periodontitis.	Did not fulfill criteria for periodontitis
Ishikado 2010	Human trial of liposomal lactoferrin supplementation for periodontal disease.	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Isola 2019	Periodontitis and Tooth Loss Have Negative Systemic Impact on Circulating Progenitor Cell Levels: A Clinical Study.	Analyte out of scope
Isola 2019	Assessment of Vitamin C and Antioxidant Profiles in Saliva and Serum in Patients with Periodontitis and Ischemic Heart Disease.	Analyte out of scope
Isola 2019	Expression of Salivary and Serum Malondialdehyde and Lipid Profile of Patients with Periodontitis and Coronary Heart Disease.	Analyte out of scope
Isola 2020	Association among serum and salivary A. actinomycetemcomitans specific immunoglobulin antibodies and periodontitis.	Analyte out of scope
Isola 2020	Association of vitamin D in patients with periodontitis: A cross-sectional study.	Analyte out of scope
Isola 2020	Analysis of Endothelin-1 Concentrations in Individuals with Periodontitis.	Other reason for exclusion
Isola 2020	Evaluation of salivary and serum asymmetric dimethylarginine (ADMA) levels in patients with periodontal and cardiovascular disease as subclinical marker of cardiovascular risk.	Analyte out of scope
Isola 2020	Association between periodontitis and glycosylated haemoglobin before diabetes onset: a cross-sectional study.	Analyte out of scope
Isola 2021	Identification of the different salivary Interleukin-6 profiles in patients with periodontitis: A cross-sectional study.	Analyte out of scope
Isola 2021	Independent impact of periodontitis and cardiovascular disease on elevated soluble urokinase-type plasminogen activator receptor (suPAR) levels.	Plasma/whole blood analyzed
Isola 2021	Association of systemic sclerosis and periodontitis with vitamin d levels	Did not fulfill criteria for periodontitis
Isola 2023	Impact of periodontitis on circulating cell-free DNA levels as a measure of cardiovascular disease.	Analyte out of scope
Isola 2023	Growth differentiation factor-15 and circulating biomarkers as predictors of periodontal treatment effects in patients with periodontitis: a randomized-controlled clinical trial.	No periodontally healthy control group
Isola 2023	Impact of N-terminal pro-B-type natriuretic peptide and related inflammatory biomarkers on periodontal treatment outcomes in patients with periodontitis: An explorative human randomized-controlled clinical trial.	No periodontally healthy control group
Isola 2024	Effects of minimally invasive non-surgical therapy on C-reactive protein, lipoprotein-associated phospholipase A(2), and clinical outcomes in periodontitis patients: A 1-year randomized, controlled clinical trial.	Analyte out of scope
Iwamoto 2003	Antimicrobial periodontal treatment decreases serum C-reactive protein, tumor necrosis factor-alpha, but not adiponectin levels in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Izumi 2009	The relationship between serum lipids and periodontitis in elderly non-smokers.	Other primary disease/condition
Izuora 2016	Changes in Inflammatory and Bone Turnover Markers After Periodontal Disease Treatment in Patients With Diabetes	Other primary disease/condition
Jagannathan 2024	Effect of non-surgical periodontal therapy on CD14 + CD16+ monocyte counts in peripheral blood samples: a clinical interventional study.	No periodontally healthy control group
Janssen 2015	Rheumatoid arthritis-associated autoantibodies in non-rheumatoid arthritis patients with mucosal inflammation: a case-control study.	Analyte out of scope
Janssen 2017	Autoantibodies against citrullinated histone H3 in rheumatoid arthritis and periodontitis patients	Did not fulfill criteria for periodontitis
Jaramillo 2013	Association between periodontal disease and plasma levels of cholesterol and triglycerides	Did not fulfill criteria for periodontitis
Jarjoura 2005	Markers of periodontal infection and preterm birth.	Other primary disease/condition

SUPPLEMENTARY DATA

Javed 2014	Whole salivary interleukin-6 and matrix metalloproteinase-8 levels in patients with chronic periodontitis with and without prediabetes.	Analyte out of scope
Javed 2015	Periodontal Status and Whole Salivary Cytokine Profile Among Smokers and Never-Smokers With and Without Prediabetes.	Other primary disease/condition
Javed 2015	Efficacy of non-surgical periodontal therapy with adjunct Nd:YAG laser therapy in the treatment of periodontal inflammation among patients with and without type 2 diabetes mellitus: A short-term pilot study	Other primary disease/condition
Javed 2016	Effect of Nd:YAG laser-assisted non-surgical periodontal therapy on clinical periodontal and serum biomarkers in patients with and without coronary artery disease: A short-term pilot study.	Did not fulfill criteria for periodontitis
Jayakumar Sunandhakumari 2018	Effect of NonSurgical Periodontal Therapy on Plasma Levels of IL-17 in Chronic Periodontitis Patients with Well Controlled Type-II Diabetes Mellitus-A Clinical Study.	Plasma/whole blood analyzed
Jenifer Cynthia 2022	Estimation of Serum Procalcitonin (ProCT/PCT) Levels in Periodontally Healthy Individuals and Chronic Periodontitis Patients with Type II Diabetes Mellitus-An Original Research	Did not fulfill criteria for periodontitis
Jentsch 2015	Reduced numbers of peripheral blood CD27+ IgD-memory B cells in patients with aggressive periodontitis	Other reason for exclusion
Jeyasree 2018	Evaluation of serum and salivary alkaline phosphatase levels in chronic periodontitis patients before and after nonsurgical periodontal therapy.	Other reason for exclusion
Jia 2022	Levels of DKK-1, MIP-1 α and IL-17 in gingival crevicular fluid and serum of patients with chronic periodontitis and their clinical significance	Full text not available/wrong language
Jia 2023	Association between lipid metabolism and periodontitis in obese patients: a cross-sectional study.	Other primary disease/condition
Jiang 2016	Salivary and serum inflammatory mediators among pre-conception women with periodontal disease.	Did not fulfill criteria for periodontitis
Jiang 2021	miR-205 and HMGB1 expressions in chronic periodontitis patients and their associations with the inflammatory factors.	Other reason for exclusion
Jin 2017	IL-35 may maintain homeostasis of the immune microenvironment in periodontitis.	Did not fulfill criteria for periodontitis
Johnson 1980	Immunopathology of periodontal disease. I. Immunologic profiles in periodontitis and juvenile periodontitis.	Full text not available/wrong language
Johnston 2020	The systemic inflammatory response following hand instrumentation versus ultrasonic instrumentation-A randomized controlled trial.	Did not fulfill criteria for periodontitis
Jorkjend 2003	Periodontitis, caries and salivary factors in Sjögren's syndrome patients compared to sex- and age-matched controls.	Other primary disease/condition
Joseph 2013	Association between chronic periodontitis and rheumatoid arthritis: a hospital-based case-control study.	Other primary disease/condition
Joshi 2010	Association between periodontal disease and Prostate-specific antigen levels in chronic prostatitis patients	Other primary disease/condition
Joshi 2004	Periodontal disease and biomarkers related to cardiovascular disease.	Did not fulfill criteria for periodontitis
Joshi 2018	Longitudinal association between periodontitis and development of diabetes	Other primary disease/condition
Jung 2015	Periodontal disease associated with blood glucose levels in urban Koreans aged 50 years and older: The Dong-gu study	Other primary disease/condition
Jönsson 2013	Beneficial effects of hormone replacement therapy on periodontitis are vitamin D associated.	Analyte out of scope
Kadhim 2019	Possible Role of Statins on the Inflammatory Biomarkers in Patients with Periodontal Disease: A Cross-Sectional Study	Did not fulfill criteria for periodontitis
Kadhim 2020	Statins improve periodontal disease-induced inflammatory changes and associated lipid peroxidation in patients with dyslipidemia: Two birds by one stone	Other primary disease/condition

SUPPLEMENTARY DATA

Kadiyala 2018	Assessment of gamma glutamyl transferase in chronic periodontitis	Did not fulfill criteria for periodontitis
Kajihara 2022	Presence of periodontitis may synergistically contribute to cancer progression via Treg and IL-6.	Did not fulfill criteria for periodontitis
Kajiura 2014	Glycated albumin and calprotectin levels in gingival crevicular fluid from patients with periodontitis and type 2 diabetes.	Did not fulfill criteria for periodontitis
Kakuta 2017	Assessing the progression of chronic periodontitis using subgingival pathogen levels: a 24-month prospective multicenter cohort study.	Analyte out of scope
Kalburgi 2014	Role of systemic markers in periodontal diseases: a possible inflammatory burden and risk factor for cardiovascular diseases?	Analyte out of scope
Kallio 2008	Lipopolysaccharide associates with pro-atherogenic lipoproteins in periodontitis patients.	No periodontally healthy control group
Kallio 2014	Genetic variation on the BAT1-NFKBIL1-LTA region of major histocompatibility complex class III associates with periodontitis.	No periodontally healthy control group
Kalsi 2022	Correlation of COVID-19 with severity of periodontitis-A clinical and biochemical study.	Analyte out of scope
Kamel 2024	Expression of Regulatory T Cell and Related Interleukins in Gingivitis Versus Stage 3, Grade B Generalized Periodontitis: Synergy or Cacophony-A Cross-Sectional Study	Other primary disease/condition
Kamil 2011	Effects of nonsurgical periodontal therapy on C-reactive protein and serum lipids in Jordanian adults with advanced periodontitis.	Analyte out of scope
Kanaparthi 2012	Evaluation of serum C-reactive protein levels in subjects with aggressive and chronic periodontitis and comparison with healthy controls.	Analyte out of scope
Kanaparthi 2012	C-reactive protein as a marker of periodontal disease.	Analyte out of scope
Kanaparthi 2015	Increased serum interleukin-1 β level in chronic periodontal disease as a risk factor for cardio-vascular diseases	Did not fulfill criteria for periodontitis
Kaneko 1992	Analysis of cell surface antigens of <i>Campylobacter rectus</i> .	Full text not available/wrong language
Kaneko 2018	Circulating levels of carbamylated protein and neutrophil extracellular traps are associated with periodontitis severity in patients with rheumatoid arthritis: A pilot case-control study.	Analyte out of scope
Kang 2015	Chronic Periodontitis Is Associated With Spinal Dymobility in Patients With Ankylosing Spondylitis.	Analyte out of scope
Kanmaz 2020	Effects of smoking on non-surgical periodontal therapy in patients with periodontitis Stage III or IV, and Grade C.	No periodontally healthy control group
Kanoriya 2017	Correlation of crevicular fluid and serum levels of retinol-binding protein 4 and leptin in chronic periodontitis and obesity.	Did not fulfill criteria for periodontitis
Kapp 2024	Serum lipoprotein subfractions are associated with the periodontal status: Results from the population-based cohort SHIP-TREND.	Analyte out of scope
Kara 2015	Short term effects of periodontal therapy on inflammatory markers in patients with type-2 diabetes.	No periodontally healthy control group
Karatas 2019	Dental hypofunction alters subgingival microorganisms: a pilot study.	Full text not available/wrong language
Karacı 2024	Comparison of growth factor levels in injectable platelet-rich fibrin obtained from healthy individuals and patients with chronic periodontitis: a pilot study.	Serum not analyzed
Kardeşler 2010	Adipokines and inflammatory mediators after initial periodontal treatment in patients with type 2 diabetes and chronic periodontitis.	No periodontally healthy control group
Karima 2005	Enhanced superoxide release and elevated protein kinase C activity in neutrophils from diabetic patients: Association with periodontitis	Other primary disease/condition
Kaslick 1980	Serum immunoglobulins in periodontosis patients.	Full text not available/wrong language

SUPPLEMENTARY DATA

Katagiri 2009	Multi-center intervention study on glycohemoglobin (HbA1c) and serum, high-sensitivity CRP (hs-CRP) after local anti-infectious periodontal treatment in type 2 diabetic patients with periodontal disease.	Other primary disease/condition
Kato 2018	Relationship between severity of periodontitis and masseter muscle activity during waking and sleeping hours.	Analyte out of scope
Kaur 2015	A study to evaluate the correlation of serum albumin levels with chronic periodontitis	Did not fulfill criteria for periodontitis
Kaur 2023	Effect of antibiotics as an adjuvant to subgingival instrumentation on systemic inflammation in patients with periodontitis: a randomized clinical trial.	Full text not available/wrong language
Kawai 1998	A novel approach for detecting an immunodominant antigen of Porphyromonas gingivalis in diagnosis of adult periodontitis.	Analyte out of scope
Kayar 2021	The effects of non-surgical periodontal therapy on neutrophil elastase and elastase alpha-1 proteinase inhibitor levels in GCF in periodontitis patients with or without acute coronary syndrome.	Analyte out of scope
Kebede 2018	Does periodontitis affect diabetes incidence and haemoglobin A1c change? An 11-year follow-up study	Other primary disease/condition
Keleş 2007	The role of periodontal disease on acute phase proteins in patients with coronary heart disease and diabetes	Analyte out of scope
Keles 2014	Analysis of YKL-40 acute-phase protein and interleukin-6 levels in periodontal disease.	Did not fulfill criteria for periodontitis
Keles Yucel 2021	Leucine-rich alpha-2 glycoprotein (LRG): A novel acute phase protein expressed in Stage 3 Grade C periodontitis before and after periodontal therapy.	Analyte out of scope
KemerDoğan 2022	Is periodontal inflamed surface area associated with serum and salivary levels of IL-1 β , visfatin, and omentin-1 in overweight/obese patients?	Other reason for exclusion
Kerishnan 2016	Identification of biomarkers for periodontal disease using the immunoproteomics approach.	Other reason for exclusion
Kerishnan 2016	Identification of biomarkers for periodontal disease using the immunoproteomics approach	Analyte out of scope
Khalaf 2024	Immunological Biomarkers IL-34, MCP-1, and MIP-1 α : Age and Sex Associations in Periodontitis Patients	Did not fulfill criteria for periodontitis
Khan 2014	Immunological study of type 2 diabetic patients with periodontal disease	Analyte out of scope
Khanna 2010	Evaluation of tumor necrosis factor- α (TNF- α) levels in plasma and their correlation with periodontal status in obese and non-obese subjects.	Other primary disease/condition
Kharaeva 2016	Effects of Standardised Fermented Papaya Gel on Clinical Symptoms, Inflammatory Cytokines, and Nitric Oxide Metabolites in Patients with Chronic Periodontitis: An Open Randomised Clinical Study.	Did not fulfill criteria for periodontitis
Khuzai 2019	Correlation between tgf- β 1 with immunoglobulin igg in patients with periodontitis	Did not fulfill criteria for periodontitis
Kiany 2015	Evaluation of serum anti-cardiolipin antibodies after non-surgical periodontal treatment in chronic periodontitis patients.	Analyte out of scope
Kim 2021	S100A8 and S100A9 in saliva, blood and gingival crevicular fluid for screening established periodontitis: a cross-sectional study	No periodontally healthy control group
Kinane 1993	Local and systemic antibody response to putative periodontopathogens in patients with chronic periodontitis: correlation with clinical indices.	Full text not available/wrong language
Kindstedt 2018	Association Between Marginal Jawbone Loss and Onset of Rheumatoid Arthritis and Relationship to Plasma Levels of RANKL.	Did not fulfill criteria for periodontitis
Kinney 2011	Saliva/pathogen biomarker signatures and periodontal disease progression.	Other reason for exclusion
Kinney 2014	Crevicular fluid biomarkers and periodontal disease progression.	Serum not analyzed

SUPPLEMENTARY DATA

Kirby 1999	Localized adhesion molecule expression and circulating LFA-3 levels in adult and early onset forms of periodontitis.	Did not fulfill criteria for periodontitis
Knie 2024	Serum biomarker levels in smokers and non-smokers following periodontal therapy. A prospective cohort study.	No periodontally healthy control group
Kobayashi 2006	Antibody responses to Porphyromonas gingivalis hemagglutinin A and outer membrane protein in chronic periodontitis.	Analyte out of scope
Kobayashi 2010	Serum cytokine and periodontal profiles in relation to disease activity of rheumatoid arthritis in Japanese adults.	Other primary disease/condition
Kocher 2019	Effect of Periodontal Treatment on HbA1c among Patients with Prediabetes.	Other primary disease/condition
Kodovazenitis 2011	Periodontal disease is associated with higher levels of C-reactive protein in non-diabetic, non-smoking acute myocardial infarction patients	Other primary disease/condition
Kojima 1997	Relationship between serum antibody levels and subgingival colonization of Porphyromonas gingivalis in patients with various types of periodontitis.	Did not fulfill criteria for periodontitis
Kokeguchi 1989	Cell surface protein antigen from Wolinella recta ATCC 33238T.	Analyte out of scope
Kolgeci 2019	Assessment of non-surgical periodontal treatment combined with Low-Level Laser Therapy (LLLT) in chronic periodontitis patients suffering from Iron Deficiency Anemia (IDA)	Full text not available/wrong language
Kolluri 2022	Comparison of Oncostatin M in Patients with Chronic Periodontitis with and without Diabetes	Did not fulfill criteria for periodontitis
Kolte 2023	Assessment and correlation of the influence of non-surgical periodontal therapy on serum lipid profile and cytokines in patients with stage III periodontitis.	No periodontally healthy control group
Komatsu 2005	Interleukin-6 (IL-6)--373 A9T11 allele is associated with reduced susceptibility to chronic periodontitis in Japanese subjects and decreased serum IL-6 level.	Did not fulfill criteria for periodontitis
Komiyama 2014	Origin of galactose-deficient immunoglobulin g in gingival crevicular fluid in periodontitis.	Did not fulfill criteria for periodontitis
Kondo 2014	A high-fiber, low-fat diet improves periodontal disease markers in high-risk subjects: A pilot study	Other primary disease/condition
Konopka 2007	Total antioxidant status and 8-hydroxy-2'-deoxyguanosine levels in gingival and peripheral blood of periodontitis patients.	Analyte out of scope
Konstantinidis 2005	Real-time polymerase chain reaction quantification of Epstein--Barr virus in chronic periodontitis patients.	Analyte out of scope
Koppikar 2013	The effect of sub-antimicrobial dose-doxycycline periodontal therapy on serum inflammatory biomarker C-reactive protein levels in post-menopausal Women: A 2-year, double-blinded, randomized clinical trial.	Other primary disease/condition
Koppolu 2021	Alkaline phosphatase and acid phosphatase levels in saliva and serum of patients with healthy periodontium, gingivitis, and periodontitis before and after scaling with root planing: A clinico-biochemical study.	Did not fulfill criteria for periodontitis
Kopra 2021	Systemic Antibiotics Influence Periodontal Parameters and Oral Microbiota, But Not Serological Markers.	Did not fulfill criteria for periodontitis
Koregol 2017	Gamma Glutamyl Transpeptidase, Smokeless Tobacco, Chronic Periodontitis: Exploring the Link.	Analyte out of scope
Kosho 2023	Cardiovascular risk assessment in periodontitis patients and controls using the European Systematic COronary Risk Evaluation (SCORE) model. A pilot study.	Analyte out of scope
KoshoMXF 2022	Cardiovascular risk assessment in periodontitis patients and controls using the European Systematic COronary Risk Evaluation (SCORE) model. A pilot study.	Analyte out of scope
Koshy 2017	The Association between Periodontal Status, Serum Lipid Levels, Lipoprotein Associated Phospholipase A2 (Lp-PLA2) in Chronic Periodontitis Subjects and Healthy Controls.	Analyte out of scope
Kotin 2022	Association between periodontitis and metabolic syndrome in the Hamburg City Health Study	Other primary disease/condition

SUPPLEMENTARY DATA

Kranthi 2013	Comparison of the serum immunoglobulin IgM level in diabetic and nondiabetic patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Kremer 2000	Peptostreptococcus micros smooth and rough genotypes in periodontitis and gingivitis.	Did not fulfill criteria for periodontitis
Krugluger 1995	Influence of sE-selectin and L-selectin on the regulation of cell migration during chronic periodontitis.	Full text not available/wrong language
Kryuchkov 2019	SCORE POSSIBLE RELATIONSHIP OF METABOLIC PHENOTYPE IN OBESITY AND PERIODONTAL TISSUE CONDITION INDICATORS	Full text not available/wrong language
Ksiazek 2020	Association between Monocyte Chemoattractant Protein-1 -2518 (A/G) Single Nucleotide Polymorphism and Chronic Periodontitis in End-stage Renal Disease Patients - A Case-control Study.	Other primary disease/condition
Kudo 2012	Assessment of the plasma/serum IgG test to screen for periodontitis.	Analyte out of scope
Kudo 2015	Analysis of the relationship between periodontal disease and atherosclerosis within a local clinical system: a cross-sectional observational pilot study	Did not fulfill criteria for periodontitis
Kudo 2018	Effects of periodontal treatment on carotid intima-media thickness in patients with lifestyle-related diseases: Japanese prospective multicentre observational study.	Other primary disease/condition
Kulshrestha 2014	Comparison of the serum immunoglobulin IgG level in diabetic and non-diabetic patients of RCDSR having Periodontitis	Did not fulfill criteria for periodontitis
Kumar 2014	Assessment of high-sensitivity C-reactive protein and lipid levels in healthy adults and patients with coronary artery disease, with and without periodontitis--a cross-sectional study.	Analyte out of scope
Kumari 2024	Assessing the Correlation of Periodontal Inflamed Surface Area (PISA) With Systemic Inflammatory Markers.	Analyte out of scope
Kundu 2014	Aggressive periodontitis: A clinico-hematological appraisal.	Did not fulfill criteria for periodontitis
Kundu 2015	Estimation of cardiovascular risk severity in chronic periodontitis patients	Did not fulfill criteria for periodontitis
KurganŞ 2016	The effects of periodontal therapy on gingival crevicular fluid matrix metalloproteinase-8, interleukin-6 and prostaglandin E2 levels in patients with rheumatoid arthritis.	Analyte out of scope
KurganŞ 2017	Gingival crevicular fluid tissue/blood vessel-type plasminogen activator and plasminogen activator inhibitor-2 levels in patients with rheumatoid arthritis: effects of nonsurgical periodontal therapy.	Analyte out of scope
Kurhańska-Flisykowska 2012	Effectiveness of Emdogain in the periodontal treatment.	Full text not available/wrong language
Kuroki 2018	Association of liver enzyme levels and alveolar bone loss: A cross-sectional clinical study in Sado Island.	Other primary disease/condition
Kuru 1992	Diagnostic studies on juvenile, rapidly progressive and adult periodontitis before and after periodontal therapy (II).	Full text not available/wrong language
Kzar 2025	Association of Polymorphism with Periodontitis and Salivary Levels of Hypoxia-Inducible Factor-1 α	Serum not analyzed
Källestål 1991	Proximal attachment loss in Swedish adolescents.	Full text not available/wrong language
Könnecke 2022	Cross-sectional study on the association of periodontitis with arterial hypertension in the Hamburg City Health Study.	Other primary disease/condition
Köseoğlu 2015	Level of Interleukin-35 in Gingival Crevicular Fluid, Saliva, and Plasma in Periodontal Disease and Health.	Plasma/whole blood analyzed
Laddha 2018	Assessment of Sirtuin 3 and Sirtuin 4 level in patients with diabetes mellitus and periodontitis: A clinical study	Did not fulfill criteria for periodontitis
Lafaurie 2023	Factors Associated with the Extent of Clinical Attachment Loss in Periodontitis: A Multicenter Cross-Sectional Study	Analyte out of scope

SUPPLEMENTARY DATA

Lafon 2014	Association between periodontal disease and non-fatal ischemic stroke: a case-control study	Other primary disease/condition
Lahdentausta 2018	Saliva and serum biomarkers in periodontitis and coronary artery disease.	Did not fulfill criteria for periodontitis
Lai 1986	Serum IgA and IgG antibodies to <i>Treponema vincentii</i> and <i>Treponema denticola</i> in adult periodontitis, juvenile periodontitis and periodontally healthy subjects.	Full text not available/wrong language
Lakio 2009	Tracking of plasma antibodies against <i>Aggregatibacter actinomycetemcomitans</i> and <i>Porphyromonas gingivalis</i> during 15 years.	Did not fulfill criteria for periodontitis
Laky 2020	Periodontal treatment does not result in detectable platelet activation <i>in vivo</i> .	Serum not analyzed
Lalitha 2022	Monocyte-to-High-density Lipoprotein Cholesterol Ratio as a Novel Inflammatory Marker in Periodontal Disease: A Pilot Study.	Analyte out of scope
Lalla 2006	Periodontal infection profiles in type 1 diabetes.	Other primary disease/condition
Lalla 2007	Effects of periodontal therapy on serum C-reactive protein, sE-selectin, and tumor necrosis factor- α secretion by peripheral blood-derived macrophages in diabetes. A pilot study.	Other primary disease/condition
Lamster 1990	The relationship of serum IgG antibody titers to periodontal pathogens to indicators of the host response in crevicular fluid.	Full text not available/wrong language
Lamster 1998	Serum IgG antibody response to <i>Actinobacillus actinomycetemcomitans</i> and <i>Porphyromonas gingivalis</i> : implications for periodontal diagnosis.	Analyte out of scope
Landry 1995	Specific serum IgA titres as realistic indicators of treatment prognoses.	Analyte out of scope
Lappin 2007	Effect of smoking on serum RANKL and OPG in sex, age and clinically matched supportive-therapy periodontitis patients.	No periodontally healthy control group
Lappin 2009	Markers of bone destruction and formation and periodontitis in type 1 diabetes mellitus.	Plasma/whole blood analyzed
Lappin 2011	Increased plasma levels epithelial cell-derived neutrophil-activating peptide 78/CXCL5 in periodontitis patients undergoing supportive therapy.	Plasma/whole blood analyzed
Lappin 2013	Influence of periodontal disease, <i>Porphyromonas gingivalis</i> and cigarette smoking on systemic anti-citrullinated peptide antibody titres.	Analyte out of scope
Lappin 2015	The Influence of Glycated Hemoglobin on the Cross Susceptibility Between Type 1 Diabetes Mellitus and Periodontal Disease.	Plasma/whole blood analyzed
Larsson 2016	Expression of TET2 enzyme indicates enhanced epigenetic modification of cells in periodontitis	Analyte out of scope
Laugisch 2016	Citrullination in the periodontium--a possible link between periodontitis and rheumatoid arthritis.	Did not fulfill criteria for periodontitis
Laugisch 2021	Oral and Periodontal Health in Patients with Alzheimer's Disease and Other Forms of Dementia - A Cross-sectional Pilot Study.	Other primary disease/condition
Lee 2008	Associations of serum concentrations of persistent organic pollutants with the prevalence of periodontal disease and subpopulations of white blood cells.	Did not fulfill criteria for periodontitis
Lee 2008	Effect of ultrasonic debridement using a chlorhexidine irrigant on circulating levels of lipopolysaccharides and interleukin-6.	No periodontally healthy control group
Lee 2015	Association between anti- <i>Porphyromonas gingivalis</i> or anti- α -enolase antibody and severity of periodontitis or rheumatoid arthritis (RA) disease activity in RA.	Other primary disease/condition
Lee 2018	<i>Treponema denticola</i> enolase contributes to the production of antibodies against ENO1 but not to the progression of periodontitis	Analyte out of scope
Lee 2022	Single-cell RNA sequencing reveals rebalancing of immunological response in patients with periodontitis after non-surgical periodontal therapy.	Plasma/whole blood analyzed

SUPPLEMENTARY DATA

Lee 2024	Associations between periodontitis and serum anti-malondialdehyde-acetaldehyde antibody concentrations in rheumatoid arthritis: A case-control study.	Other primary disease/condition
Leibur 1999	Prostaglandin E2 levels in blood plasma and in crevicular fluid of advanced periodontitis patients before and after surgical therapy.	Did not fulfill criteria for periodontitis
Leira 2017	The role of leptin as a biomarker in the relationship between periodontitis and chronic migraine.	Other primary disease/condition
Leira 2019	Periodontitis is associated with systemic inflammation and vascular endothelial dysfunction in patients with lacunar infarct.	Other primary disease/condition
Leira 2021	Mild systemic inflammation enhances response to OnabotulinumtoxinA in chronic migraineurs.	Other primary disease/condition
Leite 2014	Effects of periodontal therapy on C-reactive protein and HDL in serum of subjects with periodontitis.	Full text not available/wrong language
Leite 2015	Effects of periodontal therapy on white blood cell count and levels of transforming growth factor beta in serum of subjects with severe periodontitis.	Other reason for exclusion
Leite 2019	The effect of nonsurgical periodontal therapy on hepcidin and on inflammatory and iron marker levels.	No periodontally healthy control group
Leivadaros 2005	A pilot study into measurements of markers of atherosclerosis in periodontitis.	Analyte out of scope
Levine 2002	Antibody-based diagnostic for 'refractory' periodontitis	Analyte out of scope
Lew 2021	Antibodies against citrullinated proteins in relation to periodontitis with or without rheumatoid arthritis: a cross-sectional study.	Analyte out of scope
Li 2009	Increased levels of circulating endothelial progenitor cells in subjects with moderate to severe chronic periodontitis	Analyte out of scope
Li 2013	Periodontal therapy decreases serum levels of adipocyte fatty acid-binding protein in systemically healthy subjects: a pilot clinical trial.	No periodontally healthy control group
Li 2018	Correlation of serum adipocytokine levels with glycolipid metabolism and inflammatory factors in obese patients with periodontal disease.	Other primary disease/condition
Li 2020	Biomarkers in Metabolic Syndrome Patients with Chronic Periodontitis.	Did not fulfill criteria for periodontitis
Li 2021	White Blood Cell Count Mediates the Association Between Periodontal Inflammation and Cognitive Performance Measured by Digit Symbol Substitution Test Among Older U.S. Adults.	Did not fulfill criteria for periodontitis
Li 2022	Serum Antioxidant Vitamins Mediate the Association between Periodontitis and Metabolically Unhealthy Overweight/Obesity.	Other primary disease/condition
Li 2022	Periodontitis and cognitive impairment in older adults: The mediating role of mitochondrial dysfunction.	No periodontally healthy control group
Li 2023	Association between the quality of plant-based diets and periodontitis in the U.S. general population	Did not fulfill criteria for periodontitis
Li 2024	Randomized Trial to Test a Chemo-Mechanical Antiplaque Regimen as Adjunct to Periodontal Therapy.	Other primary disease/condition
Liljestrand 2014	Combining salivary pathogen and serum antibody levels improves their diagnostic ability in detection of periodontitis.	Analyte out of scope
Liljestrand 2018	Immunologic burden links periodontitis to acute coronary syndrome.	Did not fulfill criteria for periodontitis
Lin 2022	Correlation between chronic periodontitis and pulmonary ventilation function	Full text not available/wrong language
Lin 2024	Integrated strategies for the clinical correlation, prevention and management of chronic oral infections, wounds and arteriosclerotic occlusion in lower extremities	Did not fulfill criteria for periodontitis
Linden 2008	Persistently raised C-reactive protein levels are associated with advanced periodontal disease.	Analyte out of scope
Lindström 1973	Salivary iga in periodontal disease	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Ling 2016	Neutrophil superoxide release and plasma C-reactive protein levels pre- and post-periodontal therapy.	Analyte out of scope
Lira-Junior 2017	Salivary and Serum Markers Related to Innate Immunity in Generalized Aggressive Periodontitis.	Other reason for exclusion
Lira-Junior 2021	Periodontitis is associated to increased systemic inflammation in postmyocardial infarction patients.	Plasma/whole blood analyzed
Liu 2006	Increased local matrix metalloproteinase-8 expression in the periodontal connective tissues of smokers with periodontal disease.	Serum not analyzed
Liu 2009	Elevated plasma calcifediol is associated with aggressive periodontitis.	Plasma/whole blood analyzed
Liu 2010	Evaluation of serum levels of C-reactive protein and lipid profiles in patients with chronic periodontitis and/or coronary heart disease in an ethnic Han population.	Full text not available/wrong language
Liu 2010	Initial periodontal therapy reduced systemic and local 25-hydroxy vitamin D(3) and interleukin-1beta in patients with aggressive periodontitis.	No periodontally healthy control group
Liu 2010	Initial periodontal therapy reduced systemic and local 25-hydroxy vitamin D3 and Interleukin-1β in patients with aggressive periodontitis	No periodontally healthy control group
Liu 2013	Prevalence and risk factors of CKD in Chinese patients with periodontal disease.	No periodontally healthy control group
Liu 2013	Over-expression and potential role of cyclophilin A in human periodontitis.	Serum not analyzed
Liu 2013	Detection of serum levels of hypersensitivity C-reactive protein in patients with essential hypertension and periodontitis and clinical significance	Full text not available/wrong language
Liu 2022	Relationship between microRNA expression and inflammatory factors in patients with both type 2 diabetes mellitus and periodontal disease.	Did not fulfill criteria for periodontitis
Liu 2024	Association between blood ethylene oxide levels and periodontitis risk: a population-based study	Analyte out of scope
Ljunggren 2019	Modified lipoproteins in periodontitis: a link to cardiovascular disease?	Plasma/whole blood analyzed
Longo 2014	Serum levels of inflammatory markers in type 2 diabetes patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Loo 2011	Association of matrix metalloproteinase (MMP-1, MMP-3 and MMP-9) and cyclooxygenase-2 gene polymorphisms and their proteins with chronic periodontitis.	Plasma/whole blood analyzed
Loo 2012	Clinical application of human β-defensin and CD14 gene polymorphism in evaluating the status of chronic inflammation.	Other reason for exclusion
Loo 2012	Comparing serum levels of cardiac biomarkers in cancer patients receiving chemotherapy and subjects with chronic periodontitis.	Did not fulfill criteria for periodontitis
Loos 2000	Elevation of systemic markers related to cardiovascular diseases in the peripheral blood of periodontitis patients.	Plasma/whole blood analyzed
Lopatin 1992	Avidity and titer of immunoglobulin G subclasses to Porphyromonas gingivalis in adult periodontitis patients.	Full text not available/wrong language
Lopatin 1992	Avidity and titer of immunoglobulin G subclasses to Porphyromonas gingivalis in adult periodontitis patients	Full text not available/wrong language
Lopatin 1999	Humoral immunity to stress proteins and periodontal disease.	Did not fulfill criteria for periodontitis
López 2012	Effects of periodontal therapy on systemic markers of inflammation in patients with metabolic syndrome: a controlled clinical trial.	Other primary disease/condition
Louropoulou 2008	Mannose-binding lectin gene polymorphisms in relation to periodontitis.	Plasma/whole blood analyzed
LovelaceBM3rd 1982	Evidence for local immunoglobulin synthesis in periodontitis.	Full text not available/wrong language
Lu 1993	Immunoglobulin class and subclass distribution of antibodies reactive with the immunodominant antigen of Actinobacillus actinomycetemcomitans serotype b.	Analyte out of scope
Lu 1994	Serum immunoglobulin G subclass concentrations in periodontally healthy and diseased individuals.	Analyte out of scope

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Lu 2008	Relationship of periodontal attachment loss to peripheral vascular disease: an analysis of NHANES 1999-2002 data.	Other primary disease/condition
Lu 2022	Relationship between chronic periodontitis and inflammatory cytokines in patients undergoing maintenance hemodialysis.	No periodontally healthy control group
Lu 2023	Clinical diagnostic value of IL-14, IL-16 and SAA in periodontitis.	Did not fulfill criteria for periodontitis
Luchian 2016	Changes in biochemical parameters associated with periodontal disease	Did not fulfill criteria for periodontitis
Luo 2023	The role of IL-31 and IL-34 in the diagnosis and treatment of chronic periodontitis.	Other primary disease/condition
Lutfioğlu 2017	Gingival crevicular fluid oxidative stress level in patients with periodontal disease and hyperlipidemia.	Did not fulfill criteria for periodontitis
Luthra 2019	Comparative evaluation of C-reactive protein and complete blood count in chronic periodontitis patients following Phase I therapy: A serological and hematological study.	Did not fulfill criteria for periodontitis
Lyra 2024	Non-Surgical Periodontal Therapy's Influence on Alpha-Synuclein and Inflammatory Marker Levels: A Pilot Study.	Plasma/whole blood analyzed
Łysek 2018	Relationship between past myocardial infarction, periodontal disease and Porphyromonas gingivalis serum antibodies: A case-control study.	Other primary disease/condition
Lönn 2011	Hepatocyte growth factor in patients with coronary artery disease and its relation to periodontal condition.	Other primary disease/condition
Lösche 2005	Lipoprotein-associated phospholipase A2 and plasma lipids in patients with destructive periodontal disease.	Did not fulfill criteria for periodontitis
Ma 2021	Periodontal health related-inflammatory and metabolic profiles of patients with end-stage renal disease: potential strategy for predictive, preventive, and personalized medicine	Other primary disease/condition
Maboudi 2019	Serum levels of interleukin-23 and 35 in patients with and without type 2 diabetes mellitus and chronic periodontitis.	Did not fulfill criteria for periodontitis
Machado 2005	Relation between chronic periodontal disease and plasmatic levels of triglycerides, total cholesterol and fractions.	Did not fulfill criteria for periodontitis
Machado 2021	Association between Dietary Inflammatory Index and Periodontitis: A Cross-Sectional and Mediation Analysis.	Other primary disease/condition
Machida 2014	Longitudinal relationship between plasma reactive oxygen metabolites and periodontal condition in the maintenance phase of periodontal treatment	Did not fulfill criteria for periodontitis
Machtei 1997	Longitudinal study of prognostic factors in established periodontitis patients.	No periodontally healthy control group
Machtei 1997	Longitudinal study of prognostic factors in established periodontitis patients	No periodontally healthy control group
Mackler 1979	IgG subclasses in human periodontal disease: III. Serum concentrations of IgG subclass immunoglobulins and circulating immune complexes.	Did not fulfill criteria for periodontitis
Madi 2024	Salivary interleukin-17A and interleukin-18 levels in patients with celiac disease and periodontitis.	Other primary disease/condition
Maffei 2005	Plasma levels of mannan-binding lectin in relation to periodontitis and smoking.	Plasma/whole blood analyzed
Magán-Fernández 2014	Association of simvastatin and hyperlipidemia with periodontal status and bone metabolism markers.	Other primary disease/condition
Magnarelli 1990	Cross-reactivity of nonspecific treponemal antibody in serologic tests for Lyme disease.	Did not fulfill criteria for periodontitis
Magnusson 1991	Clinical, microbiological and immunological characteristics of subjects with "refractory" periodontal disease.	Full text not available/wrong language
Mahawi 2023	Human Neutrophil Peptide 1-3 and Vitamin D levels in periodontitis	Did not fulfill criteria for periodontitis
Maiborodina 2021	Adipocytokines leptin and adiponectin as predictors of generalized periodontitis associated with obesity.	Full text not available/wrong language

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Majchrzycka 2022	Evaluation of the relationship between psoriasis, periodontitis, and markers of inflammation.	Did not fulfill criteria for periodontitis
Malali 2010	Levels of C-reactive protein and protein C in periodontitis patients with and without cardiovascular disease.	Full text not available/wrong language
Maldonado 2020	Citrullination in periodontium is associated with <i>Porphyromonas gingivalis</i> .	Analyte out of scope
Malhotra 2012	Effect of scaling and root planing on erythrocyte count, hemoglobin and hematocrit in patients with chronic periodontal disease.	Did not fulfill criteria for periodontitis
Mallapragada 2017	Effect of Nonsurgical Periodontal Therapy on Serum Highly Sensitive Capsule Reactive Protein and Homocysteine Levels in Chronic Periodontitis: A Pilot Study.	Analyte out of scope
Manson 1977	Juvenile periodontitis (periodontosis).	Full text not available/wrong language
Marazita 1996	Genetic segregation analyses of serum IgG2 levels.	Analyte out of scope
Marcaccini 2009	Circulating matrix metalloproteinase-8 (MMP-8) and MMP-9 are increased in chronic periodontal disease and decrease after non-surgical periodontal therapy.	Plasma/whole blood analyzed
Marcaccini 2009	Circulating interleukin-6 and high-sensitivity C-reactive protein decrease after periodontal therapy in otherwise healthy subjects.	Plasma/whole blood analyzed
Markou 2023	Systemic inflammatory markers following adjunctive Nd:YAG (1064 nm) laser irradiation to step 2 of periodontal therapy: a 12-month, randomized, controlled trial.	No periodontally healthy control group
Marruganti 2024	Healthy lifestyles and better periodontal health: Results from two large population-based surveys.	Analyte out of scope
Martin 1988	A comparison of the reactivity of Eubacterium species with localized and serum immunoglobulins from rapidly progressive and adult periodontitis patients.	Full text not available/wrong language
Martinez-Aguilar 2019	Quantification of TNF- α in Patients with Periodontitis and Type 2 Diabetes.	Analyte out of scope
Martinez-Herrera 2017	Involvement of insulin resistance in normoglycaemic obese patients with periodontitis: A cross-sectional study	Other primary disease/condition
Martins 2019	One-year follow-up of the immune profile in serum and selected sites of generalized and localized aggressive periodontitis.	Other reason for exclusion
Martu 2014	THE QUANTIFICATION OF TNF- α AS A MARKER IN THE ASSESSMENT OF THE CHRONIC AND AGGRESSIVE PERIODONTAL PATHOLOGY	No periodontally healthy control group
Massarenti 2024	Evaluation of circulating IgG antibodies against <i>Porphyromonas gingivalis</i> or its gingipains as serological markers of periodontitis and carriage of the bacterium.	Analyte out of scope
Matern 2020	Effect of periodontal therapy on adipokine biomarkers in overweight.	Other primary disease/condition
Matsuda 2024	Effect of Periodontal Treatment on Reducing Chronic Inflammation in Systemically Healthy Patients With Periodontal Disease.	No periodontally healthy control group
Mattila 2002	Effect of treating periodontitis on C-reactive protein levels: A pilot study	Analyte out of scope
Mattuella 2013	Plasma cytokines levels in aggressive and chronic periodontitis.	Plasma/whole blood analyzed
Mbwana 2003	Specificity of antibodies directed against the cytolethal distending toxin of <i>Haemophilus ducreyi</i> in patients with chancroid.	Did not fulfill criteria for periodontitis
McArthur 1995	Antibody responses to suspected periodontal pathogens in elderly subjects with periodontal disease.	Full text not available/wrong language
MdTahir 2020	Impact of non-surgical periodontal therapy on serum Resistin and periodontal pathogen in periodontitis patients with obesity.	Other primary disease/condition
Mealey 1991	Development of a rapid qualitative assay for determining elevated antibody levels to periodontopathic organisms.	Analyte out of scope

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Medara 2020	T helper 17 cell-related cytokines in serum and saliva during management of periodontitis.	Did not fulfill criteria for periodontitis
Meghil 2019	The influence of vitamin D supplementation on local and systemic inflammatory markers in periodontitis patients: A pilot study.	Analyte out of scope
Meghji 1995	Serum antibody response to surface-associated material from periodontopathogenic bacteria.	Analyte out of scope
Meisel 2014	Tooth loss, periodontitis, and statins in a population-based follow-up study	Other primary disease/condition
Meisel 2016	Magnesium/Calcium Ratio in Serum Predicts Periodontitis and Tooth Loss in a 5-Year Follow-up.	Did not fulfill criteria for periodontitis
Meisel 2019	The sex paradox in the interplay between periodontitis, obesity, and serum C-reactive protein: Data from a general population.	Did not fulfill criteria for periodontitis
Meisel 2021	Individual predisposition and the intricate interplay between systemic biomarkers and periodontal risk in a general population.	Other primary disease/condition
Meisel 2021	Competing interplay between systemic and periodontal inflammation: obesity overrides the impact of oral periphery.	Did not fulfill criteria for periodontitis
Menaka 2009	Estimation of nitric oxide as an inflammatory marker in periodontitis.	Did not fulfill criteria for periodontitis
Mendoza-Azpur 2015	Adiponectin, leptin and TNF- α serum levels in obese and normal weight Peruvian adults with and without chronic periodontitis.	Did not fulfill criteria for periodontitis
Mengel 1996	Osseointegrated implants in patients treated for generalized severe adult periodontitis. An interim report.	Full text not available/wrong language
Mengel 2002	Interactions between stress, interleukin-1 β , interleukin-6 and cortisol in periodontally diseased patients.	Did not fulfill criteria for periodontitis
Mengel 2002	Interactions between stress, interleukin-1 β , interleukin-6 and cortisol in periodontally diseased patients	No periodontally healthy control group
Mercado 2001	Relationship between rheumatoid arthritis and periodontitis	Other primary disease/condition
Meschiari 2013	Salivary MMPs, TIMPs, and MPO levels in periodontal disease patients and controls.	Serum not analyzed
Meurman 2003	Dental infections and serum inflammatory markers in patients with and without severe heart disease.	Other primary disease/condition
Miao 2024	Association between ethylene oxide exposure and periodontitis: a cross-sectional study from NHANES 2013-2014.	Analyte out of scope
Michel 2001	Interleukin-4 polymorphisms in early onset periodontitis.	Did not fulfill criteria for periodontitis
Mikami 2021	Association between periodontal inflammation and serum lipid profile in a healthy population: A cross-sectional study.	Other primary disease/condition
Mindova 2016	Effects of smoking to the lipid profile in patients with periodontal disease	Full text not available/wrong language
Miranda 2018	Antagonists of Wnt/-catenin signalling in the periodontitis associated with type 2 diabetes and smoking	No periodontally healthy control group
Mirsaeva 2018	Application of herbal formulations in combined therapy of chronic generalized periodontitis in patients with syringomyelia	Full text not available/wrong language
Miskiewicz 2018	The correlation between pancreatic dysfunction markers and selected indices of periodontitis	Other primary disease/condition
Mitic 2013	Apoptosis and gingival tissue	Full text not available/wrong language
Miyashita 2012	Relationship between serum antibody titres to Porphyromonas gingivalis and hs-CRP levels as inflammatory markers of periodontitis.	Analyte out of scope
Miyoshi 1986	Humoral antibody response against Bacteroides gingivalis-specific antigen recognized by monoclonal antibody in adult periodontal patients.	Did not fulfill criteria for periodontitis
Miyoshi 2018	Association of salivary lactate dehydrogenase level with systemic inflammation in a Japanese population.	Did not fulfill criteria for periodontitis

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Mizutani 2021	Changes in oral and cognitive functions among older Japanese dental outpatients: A 2-year follow-up study.	Other primary disease/condition
Moeintaghavi 2019	Evaluation of effect of surgical and nonsurgical periodontal therapy on serum C-reactive protein, triglyceride, cholesterol, serum lipoproteins and fasting blood sugar in patients with severe chronic periodontitis	Analyte out of scope
Mogharehabet 2022	Comparative evaluation of microRNA-155 expression level and its correlation with tumor necrotizing factor α and interleukin 6 in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Mohamad 2014	Evaluation of serum anti-cardiolipin antibodies in patients with chronic periodontitis	Did not fulfill criteria for periodontitis
Mohammad 2023	The Effect of Hyaluronic Acid Gel on Periodontal Parameters, Pro-Inflammatory Cytokines and Biochemical Markers in Periodontitis Patients.	No periodontally healthy control group
Mohan 2014	Impact of scaling and root planing on C-reactive protein levels in gingival crevicular fluid and serum in chronic periodontitis patients with or without diabetes mellitus.	Analyte out of scope
Molinsky 2022	Periodontal Status, C-Reactive Protein, NT-proBNP, and Incident Heart Failure: The ARIC Study	Did not fulfill criteria for periodontitis
Mombelli 2017	Microbiologic Response to Periodontal Therapy and Multivariable Prediction of Clinical Outcome.	Did not fulfill criteria for periodontitis
Monefeldt 1989	Serum IgG antibodies reactive with lipoteichoic acid in adult patients with periodontitis.	Full text not available/wrong language
Montebugnoli 2004	Poor oral health is associated with coronary heart disease and elevated systemic inflammatory and haemostatic factors.	Did not fulfill criteria for periodontitis
Monteiro 2009	Cardiovascular disease parameters in periodontitis.	Did not fulfill criteria for periodontitis
Monteiro 2012	Measurement of the nonlinear optical response of low-density lipoprotein solutions from patients with periodontitis before and after periodontal treatment: evaluation of cardiovascular risk markers.	Did not fulfill criteria for periodontitis
Mooney 1993	Relative avidity of serum antibodies to putative periodontopathogens in periodontal disease.	Full text not available/wrong language
Mooney 1994	Humoral immune responses to Porphyromonas gingivalis and Actinobacillus actinomycetemcomitans in adult periodontitis and rapidly progressive periodontitis.	Full text not available/wrong language
Mooney 1994	Humoral immune responses to Porphyromonas gingivalis and Actinobacillus actinomycetemcomitans in adult periodontitis and rapidly progressive periodontitis	Full text not available/wrong language
Mooney 1995	Initial serum antibody titer to Porphyromonas gingivalis influences development of antibody avidity and success of therapy for chronic periodontitis.	Did not fulfill criteria for periodontitis
Mooney 2001	Humoral immune response in early-onset periodontitis: influence of smoking.	Analyte out of scope
Moritz 2021	Increased Sphingosine-1-Phosphate Serum Concentrations in Subjects with Periodontitis: A Matter of Inflammation.	No periodontally healthy control group
Morozumi 2016	Salivary pathogen and serum antibody to assess the progression of chronic periodontitis: a 24-mo prospective multicenter cohort study.	Analyte out of scope
Morozumi 2018	Increased systemic levels of inflammatory mediators following one-stage full-mouth scaling and root planing.	No periodontally healthy control group
Moscicki 2019	Biomarkers of oral inflammation in perinatally HIV-infected and perinatally HIV-exposed, uninfected youth	Other primary disease/condition
Moss 1996	Exploratory case-control analysis of psychosocial factors and adult periodontitis.	Analyte out of scope
Moss 2006	Reliability of third molar probing measures and the systemic impact of third molar periodontal pathology.	Did not fulfill criteria for periodontitis
Mostafa 2019	The adjunctive benefits of omega-3 fatty acids as a daily dietary supplementation in the treatment of chronic periodontitis (Interventional, Comparative, In vivo study)	Full text not available/wrong language
Mouton 1981	Serum antibodies to oral Bacteroides asaccharolyticus (Bacteroides gingivalis): relationship to age and periodontal disease.	Analyte out of scope

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Mouton 1987	Serum antibodies to <i>Bacteroides gingivalis</i> in periodontitis: A longitudinal study	Full text not available/wrong language
Muhammad 2018	Correlation of Serum Tumor Necrosis Factor Alpha and High Sensitive C-Reactive Protein with Clinical Periodontal Parameters in Osteoarthritis Patients	Did not fulfill criteria for periodontitis
Mukherjee 2012	Study of neutrophils isolated from peripheral blood of patients suffering from aggressive periodontitis at the cellular level: Receptors and cytoskeletal reorganization.	Wrong study population/design
Munday 2020	A Pilot Study Examining Vitamin C Levels in Periodontal Patients.	No periodontally healthy control group
MuñozAguilera 2021	Is systemic inflammation a missing link between periodontitis and hypertension? Results from two large population-based surveys.	Analyte out of scope
Murata 2001	Periodontitis and serum interleukin-6 levels in the elderly.	Did not fulfill criteria for periodontitis
Murray 1989	Antibodies to <i>Bacteroides gingivalis</i> in patients with treated and untreated periodontal disease.	Full text not available/wrong language
Musalaiah 2014	Evaluation of nonsurgical periodontal therapy in chronic periodontitis patients with anemia by estimating hematological parameters and high-sensitivity C-reactive protein levels.	Analyte out of scope
MüllerCampanile 2015	Single or repeated antimicrobial photodynamic therapy as adjunct to ultrasonic debridement in residual periodontal pockets: clinical, microbiological, and local biological effects.	No periodontally healthy control group
Mysak 2017	C-reactive protein in patients with aggressive periodontitis.	Analyte out of scope
Nafade 2022	The effect of oolong tea as an adjunct to nonsurgical management of chronic periodontitis: A randomized controlled clinical trial	No periodontally healthy control group
Nagano 2011	A low ratio of high molecular weight adiponectin to total adiponectin associates with periodontal status in middle-aged men.	Did not fulfill criteria for periodontitis
Nagaraj 2023	Hepcidin as a Risk Marker for Cardiovascular Disease in Periodontitis A Case Control Study	Did not fulfill criteria for periodontitis
Nagarajan 2019	Biologic modelling of periodontal disease progression.	No periodontally healthy control group
Nagarale 2010	Efficacy of a chairside diagnostic test kit for estimation of C-reactive protein levels in periodontal disease.	Did not fulfill criteria for periodontitis
Naito 1984	Immunoglobulin G response to subgingival gram-negative bacteria in human subjects.	Analyte out of scope
Naito 1985	The relationship between serum IgG levels to subgingival gram-negative bacteria and degree of periodontal destruction.	Full text not available/wrong language
Nakagawa 1990	Clinical, microbiological, and immunological studies following initial preparation in adult periodontitis.	Full text not available/wrong language
Nakagawa 1994	Infection by <i>Porphyromonas gingivalis</i> and <i>Actinobacillus actinomycetemcomitans</i> , and antibody responses at different ages in humans.	Full text not available/wrong language
Nakajima 2010	Periodontitis-associated up-regulation of systemic inflammatory mediator level may increase the risk of coronary heart disease.	Did not fulfill criteria for periodontitis
Nakamura 1983	Salivary enzymes: Origin and relationship to periodontal disease	Full text not available/wrong language
Nakarai 2011	Periodontal disease and hypertriglyceridemia in Japanese subjects: potential association with enhanced lipolysis.	Did not fulfill criteria for periodontitis
Nakashima 2005	Periodontal conditions in an elderly Japanese population influenced by smoking status and serum immunoglobulin G2 levels.	Analyte out of scope
Nakayama 2016	Clinical Usefulness of Novel Immunochromatographic Detection Device for <i>Porphyromonas gingivalis</i> in Evaluating Effects of Scaling and Root Planing and Local Antimicrobial Therapy.	Analyte out of scope
NanaNana 2021	Effects of non-surgical treatment of chronic periodontitis on insulin resistance and glucose tolerance in subjects without diabetes (PARODIA 2 study).	Analyte out of scope

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Naqvi 2014	Docosahexaenoic Acid and Periodontitis in Adults: A Randomized Controlled Trial.	No periodontally healthy control group
Nascimento 2019	Is there an association between depression and periodontitis? A birth cohort study.	Analyte out of scope
Navarro-Sanchez 2007	Effect of non-surgical periodontal therapy on clinical and immunological response and glycaemic control in type 2 diabetic patients with moderate periodontitis	Analyte out of scope
Nepomuceno 2017	Dyslipidemia rather than Type 2 Diabetes Mellitus or Chronic Periodontitis Affects the Systemic Expression of Pro- and Anti-Inflammatory Genes.	Analyte out of scope
Nepomuceno 2019	Systemic expression of genes related to inflammation and lipid metabolism in patients with dyslipidemia, type 2 diabetes mellitus and chronic periodontitis.	Analyte out of scope
NGuruprasad 2018	Influence of Smoking on Interleukin-34 Levels in Gingival Crevicular Fluid and Plasma in Periodontal Health and Disease: A Clinico-biochemical Study.	Plasma/whole blood analyzed
Nguyen 2016	Salivary Lipid Peroxidation in Patients With Generalized Chronic Periodontitis and Acute Coronary Syndrome.	Analyte out of scope
Nguyen 2017	Salivary oxidative stress biomarkers in chronic periodontitis and acute coronary syndrome.	Analyte out of scope
Ni 2023	Correlation between serum α -Klotho levels and different stages of periodontitis.	No periodontally healthy control group
Nibali 2007	Severe periodontitis is associated with systemic inflammation and a dysmetabolic status: A case-control study	Analyte out of scope
Nibali 2008	Interleukin-6 polymorphisms are associated with pathogenic bacteria in subjects with periodontitis.	No periodontally healthy control group
Nibali 2009	Low prevalence of subgingival viruses in periodontitis patients	Analyte out of scope
Nibali 2015	Lipid subclasses profiles and oxidative stress in aggressive periodontitis before and after treatment.	No periodontally healthy control group
Nicchio 2021	Polymorphisms in Genes of Lipid Metabolism Are Associated with Type 2 Diabetes Mellitus and Periodontitis, as Comorbidities, and with the Subjects' Periodontal, Glycemic, and Lipid Profiles	Analyte out of scope
Nicolaiciuc 2017	Study on the TNF- α , IL-1 β and IL-6 levels in patients with chronic periodontitis and cardiovascular diseases	Did not fulfill criteria for periodontitis
Nicu 2009	Soluble CD14 in periodontitis	Plasma/whole blood analyzed
Nieminen 1993	Specific antibodies against Actinobacillus actinomycetemcomitans in serum and saliva of patients with advanced periodontitis.	Full text not available/wrong language
Nieminen 1996	Value of some laboratory and clinical measurements in the treatment plan for advanced periodontitis.	Full text not available/wrong language
Nieminen 1996	Value of some laboratory and clinical measurements in the treatment plan for advanced periodontitis	Full text not available/wrong language
Nik-Azis 2021	Rheumatoid arthritis serotype and synthetic disease-modifying anti-rheumatic drugs in patients with periodontitis: A case-control study	Other primary disease/condition
NikMohamedKamal 2020	Plasma- and Saliva Exosome Profile Reveals a Distinct MicroRNA Signature in Chronic Periodontitis.	Analyte out of scope
Nile 2013	Comparison of circulating tumour necrosis factor superfamily cytokines in periodontitis patients undergoing supportive therapy: a case-controlled cross-sectional study comparing smokers and non-smokers in health and disease.	Plasma/whole blood analyzed
Nile 2016	The effect of periodontal scaling and root polishing on serum IL-17E concentrations and the IL-17A:IL-17E ratio.	No periodontally healthy control group
Nilesh 2024	Evaluation of Oxidative Stress Markers in Chronic Periodontitis: A Comparative Study of Salivary and Serum Levels of 8-OHdG	Did not fulfill criteria for periodontitis
Nizam 2015	Do salivary and serum collagenases have a role in an association between obstructive sleep apnea syndrome and periodontal disease? A preliminary case-control study.	Other primary disease/condition

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Nizam 2016	Is there an association between obstructive sleep apnea syndrome and periodontal inflammation?	Other primary disease/condition
Noack 2001	Periodontal infections contribute to elevated systemic C-reactive protein level.	Did not fulfill criteria for periodontitis
Noack 2001	Periodontal infections contribute to elevated systemic C-reactive protein level	Analyte out of scope
Noack 2013	Potential association of paraoxonase-1, type 2 diabetes mellitus, and periodontitis.	Other primary disease/condition
NobreDosSantos-Lima 2020	Novel synthetic peptide derived from Porphyromonas gingivalis Lys-gingipain detects IgG-mediated host response in periodontitis.	Analyte out of scope
Novak 2005	Heterogeneity of IgG glycosylation in adult periodontal disease.	Did not fulfill criteria for periodontitis
Novo 1997	A possible defective estimation of antineutrophil cytoplasmic antibodies in systemic lupus erythematosus due to the coexistence of periodontitis: preliminary observations.	Analyte out of scope
Novo 1999	Periodontitis and anti-neutrophil cytoplasmic antibodies in systemic lupus erythematosus and rheumatoid arthritis: A comparative study	Other primary disease/condition
Noz 2021	An Explorative Study on Monocyte Reprogramming in the Context of Periodontitis In Vitro and In Vivo.	No periodontally healthy control group
O'Brien-Simpson 2000	Serum immunoglobulin G (IgG) and IgG subclass responses to the RgpA-Kgp proteinase-adhesin complex of Porphyromonas gingivalis in adult periodontitis.	Did not fulfill criteria for periodontitis
O'Dell 1995	Avidity of antibody responses to Actinobacillus actinomycetemcomitans in periodontitis.	Analyte out of scope
O'Dell 1996	Longitudinal changes in antibody avidity to Actinobacillus actinomycetemcomitans in periodontitis.	Full text not available/wrong language
Offenbacher 2006	Effects of periodontal therapy during pregnancy on periodontal status, biologic parameters, and pregnancy outcomes: a pilot study.	Other primary disease/condition
Offenbacher 2009	Results from the Periodontitis and Vascular Events (PAVE) Study: a pilot multicentered, randomized, controlled trial to study effects of periodontal therapy in a secondary prevention model of cardiovascular disease.	Other primary disease/condition
Ogawa 1990	Bacteroides gingivalis-specific serum IgG and IgA subclass antibodies in periodontal diseases.	Analyte out of scope
OGAWA 1991	Porphyromonas gingivalis-specific serum IgG and IgA antibodies originate from immunoglobulin-secreting cells in inflamed gingiva	Did not fulfill criteria for periodontitis
Ogawa 1994	Study on Dental Caries and Periodontal Disease in Diabetes Mellitus'Frequency and Salivary Conditions'	Full text not available/wrong language
Ohyama 2010	Clinical and immunological assessment of periodontal disease in Japanese leprosy patients.	Other primary disease/condition
Okada 2021	Effect of advanced periodontal self-care in patients with early-stage periodontal diseases on endothelial function: An open-label, randomized controlled trial	Did not fulfill criteria for periodontitis
Oktay 2010	Serum and saliva sialic acid in periodontitis patients with and without cardiovascular disease.	Full text not available/wrong language
Oktay 2020	Is sialic acid a promising marker for periodontal diseases?	Did not fulfill criteria for periodontitis
Oliveira 2021	Are neutrophil extracellular traps the link for the cross-talk between periodontitis and rheumatoid arthritis physiopathology?	Other primary disease/condition
Oliveira 2022	Are neutrophil extracellular traps the link for the cross-talk between periodontitis and rheumatoid arthritis physiopathology?	Did not fulfill criteria for periodontitis
Olšanska-Seidlová 1989	Some immunological findings in adult periodontitis.	Full text not available/wrong language
Onoue 2003	Serum antibodies of periodontitis patients compared to the lipopolysaccharides of Porphyromonas gingivalis and Fusobacterium nucleatum.	Did not fulfill criteria for periodontitis
Orbak 2002	The influence of smoking and non-insulin-dependent diabetes mellitus on periodontal disease.	Did not fulfill criteria for periodontitis

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Orlandi 2021	Remote Ischemic Preconditioning Protects Against Endothelial Dysfunction in a Human Model of Systemic Inflammation: A Randomized Clinical Trial	Did not fulfill criteria for periodontitis
Orozco 2006	Interleukin-1beta, interleukin-12 and interleukin-18 levels in gingival fluid and serum of patients with gingivitis and periodontitis.	Did not fulfill criteria for periodontitis
Orozco 2006	Interleukin-1 β , interleukin-12 and interleukin-18 levels in gingival fluid and serum of patients with gingivitis and periodontitis	No periodontally healthy control group
Ottosson 2022	The inverse association between a fish consumption biomarker and gingival inflammation and periodontitis: A population-based study.	Plasma/whole blood analyzed
Ou 1997	Recognition of antigenic epitopes in lipopolysaccharide and protein from <i>Actinobacillus actinomycetemcomitans</i> by serum antibodies in untreated rapidly progressive periodontitis patients.	Analyte out of scope
Ozçaka 2010	Plasma osteoprotegerin levels are decreased in smoker chronic periodontitis patients.	Plasma/whole blood analyzed
Ozçaka 2011	Interleukin-17 and interleukin-18 levels in saliva and plasma of patients with chronic periodontitis.	Plasma/whole blood analyzed
Ozcelik 2024	The importance of mechanosensitive cell mediated prostaglandin and nitric oxide synthesis in the pathogenesis of apical periodontitis: comparative with chronic periodontitis.	Did not fulfill criteria for periodontitis
Pabolu 2013	Evaluation of the effect of one stage versus two stage full mouth disinfection on C-reactive protein and leucocyte count in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Padijal-Molina 2024	Periostin in the relation between periodontal disease and atherosclerotic coronary artery disease: A pilot randomized clinical study.	Other primary disease/condition
PaiB 2019	Correlations between Interleukin-33 and -1 α Levels in Gingival Crevicular Fluid and Plasma in Patients with Chronic or Aggressive Periodontitis and Disease-free Subjects.	Plasma/whole blood analyzed
Palathingal 2022	A Cross-Sectional Study of Serum Glutathione Peroxidase: An Antioxidative Marker in Chronic Periodontitis and Chronic Kidney Disease.	Analyte out of scope
Palikhe 2008	Lymphotoxin alpha LTA+496C allele is a risk factor for periodontitis in patients with coronary artery disease.	Other primary disease/condition
Panezai 2017	Correlation of serum cytokines, chemokines, growth factors and enzymes with periodontal disease parameters.	Did not fulfill criteria for periodontitis
Panezai 2018	Periodontal disease influences osteoclastogenic bone markers in subjects with and without rheumatoid arthritis.	Did not fulfill criteria for periodontitis
Panezai 2020	Association of Glycated Proteins with Inflammatory Proteins and Periodontal Disease Parameters.	Did not fulfill criteria for periodontitis
Panezai 2020	Upregulation of circulating inflammatory biomarkers under the influence of periodontal disease in rheumatoid arthritis patients	Did not fulfill criteria for periodontitis
Panneerselvam 2021	Evaluation of Systemic Markers Related to Anemia in Aggressive Periodontitis Patients before and after Phase I Periodontal Therapy: An Interventional Study	Full text not available/wrong language
Papantonopoulos 2014	Artificial neural networks for the diagnosis of aggressive periodontitis trained by immunologic parameters.	Wrong study population/design
Papantonopoulos 2019	Hidden noise in immunologic parameters might explain rapid progression in early-onset periodontitis.	No periodontally healthy control group
Papapanagiotou 2009	Periodontitis is associated with platelet activation.	Plasma/whole blood analyzed
Papapanou 2000	"Checkerboard" assessments of periodontal microbiota and serum antibody responses: a case-control study.	Did not fulfill criteria for periodontitis
Papapanou 2001	Interleukin-1 gene polymorphism and periodontal status. A case-control study.	Did not fulfill criteria for periodontitis
Papapanou 2001	Checkerboard assessments of serum antibodies to oral microbiota as surrogate markers of clinical periodontal status.	Analyte out of scope
Papapanou 2004	Longitudinal stability of serum immunoglobulin G responses to periodontal bacteria.	Did not fulfill criteria for periodontitis

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Papapanou 2004	Gene expression signatures in chronic and aggressive periodontitis: a pilot study.	No periodontally healthy control group
Papapanou 2007	Periodontal therapy alters gene expression of peripheral blood monocytes.	No periodontally healthy control group
Parachuru 2018	FoxP3⁺ regulatory T cells, interleukin 17 and mast cells in chronic inflammatory periodontal disease	Serum not analyzed
Parashar 2013	Co-relation between chronic periodontitis and anemia - A pilot study	Analyte out of scope
Park 2010	Identification of immunological parameters associated with the alveolar bone level in periodontal patients.	Did not fulfill criteria for periodontitis
Passoja 2008	Matrix metalloproteinase-8 concentration in shallow crevices associated with the extent of periodontal disease.	Did not fulfill criteria for periodontitis
Passoja 2010	Serum levels of interleukin-10 and tumour necrosis factor- α in chronic periodontitis.	Did not fulfill criteria for periodontitis
Passoja 2011	Serum interleukin-6 may modulate periodontal inflammation in type 1 diabetic subjects.	Other primary disease/condition
Patel 2013	Resistin in serum and gingival crevicular fluid as a marker of periodontal inflammation and its correlation with single-nucleotide polymorphism in human resistin gene at -420.	Did not fulfill criteria for periodontitis
Patel 2014	Association of metabolic syndrome and periodontal disease in an Indian population.	Other primary disease/condition
Paul 2020	Comparative evaluation of expression of VEGF (vascular endothelial growth factors) in periodontal tissues of healthy, chronic and aggressive periodontitis patients: an immunohistochemical study	Serum not analyzed
Payne 2011	The effect of subantimicrobial-dose-doxycycline periodontal therapy on serum biomarkers of systemic inflammation: a randomized, double-masked, placebo-controlled clinical trial.	Other primary disease/condition
Pejcic 2011	Association between Periodontopathogens and CRP Levels in Patients with Periodontitis in Serbia.	Analyte out of scope
Pejcic 2011	C-reactive protein as a systemic marker of inflammation in periodontitis.	Did not fulfill criteria for periodontitis
Pejčić 2011	The effects of periodontal therapy on C-reactive protein and periodontal pathogens in periodontitis patients	Full text not available/wrong language
Peng 1988	Serum antibodies to native and denatured type I and III collagen in patients with periodontal disease.	Full text not available/wrong language
Penmetsa 2020	Analysis of Plasma Homocysteine Levels in Patients with Chronic Periodontitis Before and After Nonsurgical Periodontal Therapy Using High-Performance Liquid Chromatography.	Plasma/whole blood analyzed
Penumarthi 2013	Assessment of serum levels of triglycerides, total cholesterol, high-density lipoprotein cholesterol, and low-density lipoprotein cholesterol in periodontitis patients.	Analyte out of scope
Perera 2021	Impaired host response and the presence of Acinetobacter baumannii in the serum microbiome of type-II diabetic patients.	Other primary disease/condition
Pers 2005	Is periodontal disease mediated by salivary BAFF in Sjögren's syndrome?	Did not fulfill criteria for periodontitis
Persson 2000	Serum antibody titers to Bacteroides forsythus in elderly subjects with gingivitis or periodontitis.	Did not fulfill criteria for periodontitis
Persson 2005	High-sensitivity serum C-reactive protein levels in subjects with or without myocardial infarction or periodontitis.	Analyte out of scope
PeruzzoLopes 2017	Effect of basic periodontal treatment on glycemic control and inflammation in patients with diabetes mellitus type 1 and type 2: controlled clinical trial	No periodontally healthy control group
Pessoa 2019	Host-Microbial Interactions in Systemic Lupus Erythematosus and Periodontitis.	Other primary disease/condition
Petrovic 2020	The association of tumor necrosis factor alpha, lymphotoxin alpha, tumor necrosis factor receptor 1 and tumor necrosis factor receptor 2 gene polymorphisms and	Other reason for exclusion

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	serum levels with periodontitis and type 2 diabetes in Serbian population.	
Picolos 2005	Infection patterns in chronic and aggressive periodontitis.	Analyte out of scope
Piconi 2009	Treatment of periodontal disease results in improvements in endothelial dysfunction and reduction of the carotid intima-media thickness.	Did not fulfill criteria for periodontitis
Pietropaoli 2020	Association between periodontal inflammation and hypertension using periodontal inflamed surface area and bleeding on probing	Other primary disease/condition
Pietruska 1998	Interleukin 6 and its soluble receptor in periodontitis.	Full text not available/wrong language
Pietruska 2000	Polypeptide growth factors in the course of surgical periodontal treatment.	Full text not available/wrong language
Pietrzak 1998	Characterization of serum antibodies to Porphyromonas gingivalis in individuals with and without periodontitis.	Analyte out of scope
Pinelis 2012	Heat shock protein concentrations in chronic generalized periodontitis of elderly patients	Did not fulfill criteria for periodontitis
Pinho 2009	Relationship between periodontitis and rheumatoid arthritis and the effect of non-surgical periodontal treatment	Analyte out of scope
Pinho 2017	Levels of serum sclerostin, metabolic parameters, and periodontitis in postmenopausal women with diabetes	Did not fulfill criteria for periodontitis
Pink 2015	Longitudinal effects of systemic inflammation markers on periodontitis	Analyte out of scope
PirimGorgun 2017	IL-6 and IL-10 gene polymorphisms in patients with aggressive periodontitis: effects on GCF, serum and clinic parameters.	Wrong study population/design
Pischon 2007	Influence of periodontal therapy on the regulation of soluble cell adhesion molecule expression in aggressive periodontitis patients.	No periodontally healthy control group
Pitiphat 2008	C-reactive protein associated with periodontitis in a Thai population.	Analyte out of scope
Plachokova 2021	Oral Microbiome in Relation to Periodontitis Severity and Systemic Inflammation.	Did not fulfill criteria for periodontitis
Podzimek 2015	C-Reactive Protein in Peripheral Blood of Patients with Chronic and Aggressive Periodontitis, Gingivitis, and Gingival Recessions.	Analyte out of scope
Polak 1995	IgG antibody subclass response to Porphyromonas gingivalis outer membrane antigens in gingivitis and adult periodontitis.	Full text not available/wrong language
Polak 1995	Purification and characterization of porphyromonas gingivalis outer membrane antigens	Analyte out of scope
Polizzi 2020	Influence of myeloperoxidase levels on periodontal disease: An applied clinical study	Plasma/whole blood analyzed
Popescu 2023	Evaluation of Pentraxin 3 and Serum Amyloid A in the Gingival Crevicular Fluid of Patients with Periodontal Disease and Obesity.	Serum not analyzed
Popławska-Kita 2014	Association between type 1 diabetes and periodontal health.	Did not fulfill criteria for periodontitis
Porwal 2014	Periodontal status and high-sensitivity C-reactive protein levels in polycystic ovary syndrome with and without medical treatment.	Other primary disease/condition
Posada-López 2023	Lack of association between periodontitis and rheumatoid arthritis.	No periodontally healthy control group
Prabhu 1996	Detection of Local and Systemic Cytokines in Adult Periodontitis	Full text not available/wrong language
Pradeep 2009	Gingival crevicular fluid and plasma levels of neuropeptide Substance-P in periodontal health, disease and after nonsurgical therapy.	Did not fulfill criteria for periodontitis
Pradeep 2010	Progressive periodontal disease has a simultaneous incremental elevation of gingival crevicular fluid and serum CRP levels.	Did not fulfill criteria for periodontitis
Pradeep 2010	Serum levels of oncostatin M (a gp 130 cytokine): an inflammatory biomarker in periodontal disease.	Did not fulfill criteria for periodontitis

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Pradeep 2011	Gingival crevicular fluid and serum vascular endothelial growth factor: their relationship in periodontal health, disease and after treatment.	Did not fulfill criteria for periodontitis
Pradeep 2011	Gingival crevicular fluid and serum visfatin concentration: their relationship in periodontal health and disease.	Did not fulfill criteria for periodontitis
Pradeep 2011	Levels of pentraxin-3 in gingival crevicular fluid and plasma in periodontal health and disease.	Did not fulfill criteria for periodontitis
Pradeep 2012	Association of progranulin and high sensitivity CRP concentrations in gingival crevicular fluid and serum in chronic periodontitis subjects with and without obesity.	Did not fulfill criteria for periodontitis
Pradeep 2012	Association of serum and crevicular visfatin levels in periodontal health and disease with type 2 diabetes mellitus.	Did not fulfill criteria for periodontitis
Pradeep 2013	4-Hydroxy-2-nonenal, an oxidative stress marker in crevicular fluid and serum in type 2 diabetes with chronic periodontitis.	Did not fulfill criteria for periodontitis
Pradeep 2013	Correlation of MCP-4 and high-sensitivity C-reactive protein as a marker of inflammation in obesity and chronic periodontitis.	Did not fulfill criteria for periodontitis
Pradeep 2013	Post-treatment levels of stem cell factor and hs-CRP in serum and crevicular fluid of chronic periodontitis subjects with type 2 diabetes.	Other primary disease/condition
Pradeep 2014	Correlation of human S100A12 (EN-RAGE) and high-sensitivity C-reactive protein as gingival crevicular fluid and serum markers of inflammation in chronic periodontitis and type 2 diabetes.	Did not fulfill criteria for periodontitis
Prasad 2015	Interleukin-11 - its role in the vicious cycle of inflammation, periodontitis and diabetes: A clinicobiochemical cross-sectional study.	Did not fulfill criteria for periodontitis
Prasanna 2017	Correlative analysis of plasma and urine neopterin levels in the pre- and post-menopausal women with periodontitis, following nonsurgical periodontal therapy.	No periodontally healthy control group
Prasanna 2019	Biochemical Analysis of Three Biological Fluids and its Response to Non-Surgical Periodontal Therapy in Pre and Postmenopausal Women with Periodontitis.	Did not fulfill criteria for periodontitis
Prashaanthi 2019	Estimation of C-reactive protein levels in chronic periodontitis	Analyte out of scope
Preferansow 2015	Pathologies of the oral cavity in patients with non-controlled diabetes type 1 and type 2 - Analysis of periodontal status and periodontal treatment needs	Other primary disease/condition
Priyanka 2013	Crevicular fluid and serum concentrations of progranulin and high sensitivity CRP in chronic periodontitis and type 2 diabetes.	Did not fulfill criteria for periodontitis
Pruthi 1990	Serological investigation of refractory human adult periodontitis.	Full text not available/wrong language
Puhar 2012	Carotid intima-Media thickness in patients with chronic and aggressive periodontitis	Analyte out of scope
Pulido-Moran 2017	The relationship between insulin resistance and periodontitis is not affected by Mediterranean diet in a Spanish population	Analyte out of scope
Purnamasari 2019	The influence of diabetes and or periodontitis on inflammation and adiponectin level	Other reason for exclusion
Pushparani 2014	CATHEPSIN D LEVEL IN THE HUMAN GINGIVAL TISSUES AND SERUM OF PERIODONTITIS SUBJECTS	Analyte out of scope
Pushparani 2015	Influence of serum zinc on calcium, iron and magnesium levels in type 2 diabetes mellitus with periodontitis	Analyte out of scope
Pushparani 2015	Serum zinc and iron level in type 2 diabetes mellitus with periodontitis	Other primary disease/condition
Pushparani 2016	Role of zinc and lysosomal enzymes in type 2 diabetes mellitus with periodontitis	Full text not available/wrong language
Pushparani 2016	Serum Zinc and β D Glucuronidase Enzyme Level in Type 2 Diabetes Mellitus with Periodontitis	Analyte out of scope
Pussinen 2002	Multiserotype enzyme-linked immunosorbent assay as a diagnostic aid for periodontitis in large-scale studies.	Analyte out of scope

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Pussinen 2004	Severe periodontitis enhances macrophage activation via increased serum lipopolysaccharide.	Analyte out of scope
Pussinen 2011	Periodontal pathogen carriage, rather than periodontitis, determines the serum antibody levels.	Did not fulfill criteria for periodontitis
Qi 2013	Role of serum IL-23/IL-17 axis in the relationship between periodontitis and coronary heart disease.	Full text not available/wrong language
Quinn 1996	Influence of smoking and race on immunoglobulin G subclass concentrations in early-onset periodontitis patients.	Analyte out of scope
Quinn 1998	The influence of smoking and race on adult periodontitis and serum IgG2 levels.	Analyte out of scope
Radafshar 2010	Effect of intensive non-surgical treatment on the level of serum inflammatory markers in advanced periodontitis.	Analyte out of scope
Radhi 2020	Anti-phosphoryl choline and hs-CRP in serum of atherosclerosis cardiovascular patient with chronic periodontitis	Full text not available/wrong language
Rafique 2019	The relationship of 1,25-dihydroxyvitamin D and Vitamin D binding protein in periodontitis.	Analyte out of scope
Rafique 2021	Case-control study for assessment of factors associated with periodontitis among adults attending a university hospital in Karachi, Pakistan.	Full text not available/wrong language
Rafique 2021	Association of vitamin d binding protein with interleukin-6 levels in patients with periodontitis	Did not fulfill criteria for periodontitis
Rahajoe 2020	Increased IgA anti-citrullinated protein antibodies in the periodontal inflammatory exudate of healthy individuals compared to rheumatoid arthritis patients.	Did not fulfill criteria for periodontitis
Rahajoe 2021	No Obvious Role for Suspicious Oral Pathogens in Arthritis Development.	Did not fulfill criteria for periodontitis
Rahman 2005	Prospective evaluation of the systemic inflammatory marker C-reactive protein in patients with end-stage periodontitis getting teeth replaced with dental implants: a pilot investigation.	Analyte out of scope
Rai 2008	Effect of Treatment of Periodontitis on C-reactive Protein, Tissue Plasminogen Activator and High-serum/Low Density Lipoprotein in Cholesterol: A Pilot Study	Full text not available/wrong language
Rai 2012	Possible relationship between periodontitis and dementia in a North Indian old age population: a pilot study.	Did not fulfill criteria for periodontitis
Rai 2023	Periodontitis Severity Grading Scale and C-Reactive Protein: A Possible Relation.	Analyte out of scope
Rajan 2013	Comparison of glycosylated hemoglobin (HbA1C) levels in patients with chronic periodontitis and healthy controls.	Did not fulfill criteria for periodontitis
Rajapakse 2004	Evidence for local production of antibodies to auto and non-self antigens in periodontal disease.	Did not fulfill criteria for periodontitis
Rajathilagam 2021	IL-6, a Therapeutic Target and Omega-3 PUFA, a Host Modulator in Chronic Periodontitis	Did not fulfill criteria for periodontitis
Ramich 2018	Inflammatory serum markers up to 5 years after comprehensive periodontal therapy of aggressive and chronic periodontitis.	No periodontally healthy control group
Ramirez 2014	Biomarkers of cardiovascular disease are increased in untreated chronic periodontitis: a case control study.	Plasma/whole blood analyzed
Ramirez-Tortosa 2010	Periodontitis is associated with altered plasma fatty acids and cardiovascular risk markers.	Plasma/whole blood analyzed
Rams 2006	Actinobacillus actinomycetemcomitans and Porphyromonas gingivalis subgingival presence, species-specific serum immunoglobulin G antibody levels, and periodontitis disease recurrence.	Did not fulfill criteria for periodontitis
Rangé 2013	Orosomuroid, a new biomarker in the association between obesity and periodontitis.	Other primary disease/condition
Ranney 1981	Immunological studies of young adults with severe periodontitis: I. Medical evaluation and humoral factors	Full text not available/wrong language
Ranney 1982	Relationship between attachment loss and precipitating serum antibody to Actinobacillus actinomycetemcomitans in adolescents and young adults having severe periodontal destruction.	Full text not available/wrong language

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Rao 1995	A study of antitrypsin and macroglobulin levels in serum and saliva of patients with gingivitis.	Did not fulfill criteria for periodontitis
Rao 2013	An investigation of blood hemogram and estimation of serum iron and protein levels in aggressive periodontitis patients: a clinic biochemical study.	Did not fulfill criteria for periodontitis
Rapone 2022	The Impact of Periodontal Inflammation on Endothelial Function Assessed by Circulating Levels of Asymmetric Dimethylarginine: A Single-Blinded Randomized Clinical Trial.	No periodontally healthy control group
Rasperini 2019	Effects of food supplements on periodontal status and local and systemic inflammation after nonoperative periodontal treatment.	Did not fulfill criteria for periodontitis
Rathinasamy 2020	Estimation of TNF- α Levels in Saliva and Serum of Patients with Periodontal Health and Chronic Periodontitis: A Case-control Study.	Did not fulfill criteria for periodontitis
Rathnayake 2017	Saliva and plasma levels of cardiac-related biomarkers in post-myocardial infarction patients.	Other primary disease/condition
Raunio 2007	The extent of periodontal disease and the IL-6 -174 genotype as determinants of serum IL-6 level.	Did not fulfill criteria for periodontitis
Raval 2017	To Evaluate and Compare Periodontal Disease and Smoking as a Parallel Risk Factor for Systemic Health by Gauging the Serum C-Reactive Protein Levels.	Analyte out of scope
Rebeis 2019	Effect of periodontal treatment on Aggregatibacter actinomycetemcomitans colonization and serum IgG levels against A. actinomycetemcomitans serotypes and Omp29 of aggressive periodontitis patients.	Analyte out of scope
Reckelkamm 2022	Association between bone turnover markers and periodontitis: A population-based cross-sectional study.	Other primary disease/condition
Reckelkamm 2023	Targeted proteomics in a population-based study identifies serum PECAM-1 and TRIM21 as inflammation markers for periodontitis.	Other primary disease/condition
Reckelkamm 2023	Optimizing a Diagnostic Model of Periodontitis by Using Targeted Proteomics.	Other reason for exclusion
Reckelkamm 2024	Targeted proteomics in a population-based study identifies serum PECAM-1 and TRIM21 as inflammation markers for periodontitis	Did not fulfill criteria for periodontitis
Reddy 2015	Evaluation of Association between CRP Levels in Chronic Periodontitis patients and Chronic Periodontitis with Cardiovascular Diseases	Full text not available/wrong language
Reichert 2015	Association of levels of antibodies against citrullinated cyclic peptides and citrullinated α -enolase in chronic and aggressive periodontitis as a risk factor of Rheumatoid arthritis: a case control study.	Analyte out of scope
Reiff 1984	Serum and salivary IgG and IgA response to initial preparation therapy.	Full text not available/wrong language
Reinhardt 1989	IgG subclasses in gingival crevicular fluid from active versus stable periodontal sites.	Full text not available/wrong language
Ren 2016	Decreased circulating neopterin is associated with increased arterial elasticity: a beneficial role of periodontal treatment.	No periodontally healthy control group
Renjith 2021	Estimation and correlation of procalcitonin in saliva and serum of chronic periodontitis patients before and after nonsurgical periodontal therapy: An analytical comparative study.	No periodontally healthy control group
Renvert 2006	Bacterial profile and burden of periodontal infection in subjects with a diagnosis of acute coronary syndrome.	Other primary disease/condition
Renvert 2009	Short-term effects of an anti-inflammatory treatment on clinical parameters and serum levels of C-reactive protein and proinflammatory cytokines in subjects with periodontitis.	Did not fulfill criteria for periodontitis
Renvert 2010	Periodontitis: a future risk of acute coronary syndrome? A follow-up study over 3 years.	Analyte out of scope
Renvert 2013	Tooth loss and periodontitis in older individuals: results from the Swedish National Study on Aging and Care.	Analyte out of scope
Requirand 2000	Serum fatty acid imbalance in bone loss: example with periodontal disease.	Did not fulfill criteria for periodontitis

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Reshma 2013	Chromogranin A: Novel biomarker between periodontal disease and psychosocial stress.	Plasma/whole blood analyzed
Restaino 2007	Stimulatory response of neutrophils from periodontitis patients with periodontal pathogens.	Serum not analyzed
RibeiroCCC 2021	Systemic circulating inflammatory burden and periodontitis in adolescents.	Did not fulfill criteria for periodontitis
Ridha 2018	Assessment of some immunological biomarkers in saliva and serum of iraqi patients with chronic periodontitis disease	Did not fulfill criteria for periodontitis
Riviere 1991	Identification of spirochetes related to Treponema pallidum in necrotizing ulcerative gingivitis and chronic periodontitis.	Analyte out of scope
Rizzo 2012	Heat-shock protein 60 kDa and atherogenic dyslipidemia in patients with untreated mild periodontitis: a pilot study.	Did not fulfill criteria for periodontitis
Robati 2011	Detection of IL-4, IL-6 and IL-12 serum levels in generalized aggressive periodontitis.	Serum not analyzed
Rodríguez 2021	Adipokines and periodontal markers as risk indicators of early rheumatoid arthritis: a cross-sectional study.	Other primary disease/condition
Rodríguez-Lozano 2019	Association between severity of periodontitis and clinical activity in rheumatoid arthritis patients: A case-control study	Other primary disease/condition
Rodríguez-Montaña 2021	IL-23/IL-17 axis and soluble receptors isoforms sIL-23R and sIL-17RA in patients with rheumatoid arthritis-presenting periodontitis.	Plasma/whole blood analyzed
Rodríguez-Montaña 2022	Levels of IL-23/IL-17 Axis in Plasma and Gingival Tissue of Periodontitis Patients According to the New Classification	Did not fulfill criteria for periodontitis
Romandini 2018	Periodontitis and platelet count: A new potential link with cardiovascular and other systemic inflammatory diseases.	Did not fulfill criteria for periodontitis
Romero-Sánchez 2022	Association of Serum and Crevicular Fluid Dickkopf-1 Levels with Disease Activity and Periodontitis in Patients with Early Rheumatoid Arthritis.	Full text not available/wrong language
Romero-Sánchez 2023	High Levels of Leptin and Adipsin Are Associated with Clinical Activity in Early Rheumatoid Arthritis Patients with Overweight and Periodontal Infection.	Other primary disease/condition
Rong 2020	Chronic Periodontitis and Alzheimer Disease: A Putative Link of Serum Proteins Identification by 2D-DIGE Proteomics.	Did not fulfill criteria for periodontitis
RosaRAC 2023	The Relationship between Hypertension and Periodontitis: A Cross-Sectional Study.	Analyte out of scope
Rose-Hill 2011	Improved periodontal health and cardiovascular risk.	Did not fulfill criteria for periodontitis
Rovas 2021	Analysis of periodontitis-associated miRNAs in gingival tissue, gingival crevicular fluid, saliva and blood plasma.	Analyte out of scope
Rubinstein 2024	Periodontitis and brain magnetic resonance imaging markers of Alzheimer's disease and cognitive aging	Did not fulfill criteria for periodontitis
Rufail 2005	Altered lipoprotein subclass distribution and PAF-AH activity in subjects with generalized aggressive periodontitis.	Analyte out of scope
Ruma 2008	Maternal periodontal disease, systemic inflammation, and risk for preeclampsia.	Other primary disease/condition
Rzeszutko 2006	Anti-neutrophil cytoplasmic antibodies and autoantibodies to human heat shock protein 60 in periodontitis patients	Full text not available/wrong language
Sadiqa 2019	SERUM RATIO ANALYSIS OF CRP/IL-6 IN PATIENTS OF PERIODONTITIS AND CARDIOVASCULAR DISEASES	Did not fulfill criteria for periodontitis
SaffiMAL 2018	Periodontal therapy and endothelial function in coronary artery disease: A randomized controlled trial.	Other primary disease/condition
Sağlam 2015	Levels of interleukin-37 in gingival crevicular fluid, saliva, or plasma in periodontal disease.	Plasma/whole blood analyzed
Sağlam 2017	Increased levels of interleukin-33 in gingival crevicular fluids of patients with chronic periodontitis.	Plasma/whole blood analyzed

SUPPLEMENTARY DATA

Sahingur 2003	Association of increased levels of fibrinogen and the -455G/A fibrinogen gene polymorphism with chronic periodontitis.	Did not fulfill criteria for periodontitis
Sahingur 2003	Association of increased levels of fibrinogen and the -455G/A fibrinogen gene polymorphism with chronic periodontitis	Did not fulfill criteria for periodontitis
Saito 1993	Significance of serum antibody against surface antigens of <i>Actinobacillus actinomycetemcomitans</i> in patients with adult periodontitis.	Full text not available/wrong language
Saito 1993	Relative avidity of serum immunoglobulin G antibody for the fimbria antigen of <i>Actinobacillus actinomycetemcomitans</i> in patients with adult periodontitis.	Analyte out of scope
Saito 2003	Association between alveolar bone loss and elevated serum C-reactive protein in Japanese men.	Did not fulfill criteria for periodontitis
Saito 2008	Serum levels of resistin and adiponectin in women with periodontitis: the Hisayama study.	Did not fulfill criteria for periodontitis
Sakai 2001	<i>Porphyromonas gingivalis</i> -specific IgG subclass antibody levels as immunological risk indicators of periodontal bone loss.	Did not fulfill criteria for periodontitis
Sakalauskiene 2016	Peripheral Blood Leukocytes Interleukin-1 Beta (IL-1 β) Cytokine Hyper-Reactivity in Chronic Periodontitis.	Serum not analyzed
Sakanaka 2021	Saliva and Plasma Reflect Metabolism Altered by Diabetes and Periodontitis.	Other primary disease/condition
SalamAli 2023	The Association between Changes in Serum Biomarkers of Inflammatory Mediators and Periodontal Disease	Full text not available/wrong language
Salman 2022	Evaluating Osteocalcin and Osteonectin in serum male patients with type 2 Diabetes mellitus and periodontitis	Wrong study population/design
Salzberg 2006	C-reactive protein levels in patients with aggressive periodontitis.	Analyte out of scope
Samad 2019	Effect of scaling and root planing treatment on levels Hs-CRP in Indonesian patients with risk of cardiovascular disease	Did not fulfill criteria for periodontitis
Sandler 2024	Diagnostic informativeness of studying gingival fluid for assessing local and systemic inflammatory changes in the body	Full text not available/wrong language
Sanikop 2022	Assessment of Serum Parameters in Stable Coronary Artery Disease Patients in Correlation with Healthy and Chronic Periodontitis Patients.	Analyte out of scope
Sanikop 2022	Assessment of Serum Parameters in Stable Coronary Artery Disease Patients in Correlation with Healthy and Chronic Periodontitis Patients Original Article	Analyte out of scope
Santhosh 2024	Correlation of C-Reactive Proteins With Chronic Periodontitis. A Prospective Study	Analyte out of scope
Santos 1996	Serum antibody response to <i>Actinobacillus actinomycetemcomitans</i> in Down's syndrome	Full text not available/wrong language
SaqibAbullais 2023	Estimation of serum C-reactive protein activity in periodontal health and disease and response to treatment: a clinico-biochemical study.	Analyte out of scope
Saraiva 2014	IgG sera levels against a subset of periodontopathogens and severity of disease in aggressive periodontitis patients: a cross-sectional study of selected pocket sites.	Analyte out of scope
Saraswathi 2020	Effect of Nonsurgical Periodontal Therapy on Serum Level of Interleukin-6 and Tumor Necrosis Factor- α in Chronic Periodontitis Patients with and without Hypothyroidism.	No periodontally healthy control group
Saravanan 2017	Estimation of Serum Triglycerides, Serum Cholesterol, Total Protein, IgG Levels in Chronic Periodontitis Affected Elderly Patients: A Cross-Sectional Study.	Did not fulfill criteria for periodontitis
Sargolzai 2008	Association of periodontal diseases with C reactive protein	Did not fulfill criteria for periodontitis
Sari 2022	Association between periodontal inflamed surface area and serum acute phase biomarkers in patients with sickle cell anemia.	Analyte out of scope

SUPPLEMENTARY DATA

Saxlin 2009	Role of serum cytokines tumour necrosis factor- α and interleukin-6 in the association between body weight and periodontal infection.	Did not fulfill criteria for periodontitis
Saxlin 2009	Role of serum cytokines tumour necrosis factor- α and interleukin-6 in the association between body weight and periodontal infection	Did not fulfill criteria for periodontitis
Schenck 1987	IgG subclass distribution of serum antibodies against lipopolysaccharide from <i>Bacteroides gingivalis</i> in periodontal health and disease.	Full text not available/wrong language
Schenck 1987	Antibodies against lipopolysaccharide from <i>Bacteroides gingivalis</i> before and after periodontal treatment.	Full text not available/wrong language
SCHENCK 1987	Antibodies against lipopolysaccharide from <i>Bacteroides gingivalis</i> before and after periodontal treatment	Full text not available/wrong language
Schenck 1989	Serum levels of antibodies against <i>Actinobacillus actinomycetemcomitans</i> in various forms of human periodontitis.	Analyte out of scope
Schenkein 1999	Antiphosphorylcholine antibody levels are elevated in humans with periodontal diseases.	Analyte out of scope
Schenkein 2003	Anti-cardiolipin antibodies in sera from patients with periodontitis.	Analyte out of scope
Schenkein 2004	Locally produced anti-phosphorylcholine and anti-oxidized low-density lipoprotein antibodies in gingival crevicular fluid from aggressive periodontitis patients.	No periodontally healthy control group
Schenkein 2018	Anticardiolipin (aCL) in sera from periodontitis subjects activate Toll-like receptor 4 (TLR4).	Other reason for exclusion
Schiefelbein 2018	Periodontal conditions during arthritis therapy with TNF- α blockers	Analyte out of scope
Schmalz 2019	Associations of chairside salivary aMMP-8 findings with periodontal parameters, potentially periodontal pathogenic bacteria and selected blood parameters in systemically healthy adults.	Analyte out of scope
Schmalz 2019	MMP-8 and TIMP-1 are associated to periodontal inflammation in patients with rheumatoid arthritis under methotrexate immunosuppression - First results of a cross-sectional study.	Other primary disease/condition
Schulz 2019	Secreted frizzled-related protein 5 serum levels in human periodontitis-A nested case-control study.	Did not fulfill criteria for periodontitis
Schulze-Späte 2015	Relationship of Bone Metabolism Biomarkers and Periodontal Disease: The Osteoporotic Fractures in Men (MrOS) Study.	Other primary disease/condition
Schulze-Späte 2017	Periodontitis and bone metabolism in patients with advanced heart failure and after heart transplantation.	Other primary disease/condition
Segovia 2011	Autoantibodies to the β 1-adrenoceptor from patients with periodontitis as a risk factor for cardiac dysfunction	Analyte out of scope
Segovia 2012	Role of anti- β 1 adrenergic antibodies from patients with periodontitis in cardiac dysfunction.	Analyte out of scope
Senpuku 2007	Relationships of anti-PAc (361-386) peptide salivary IgA antibody, eosinophils and basophils with periodontal status in the elderly.	Did not fulfill criteria for periodontitis
Seppänen 2007	Complement and c4 null alleles in severe chronic adult periodontitis.	Plasma/whole blood analyzed
Seringec 2015	Investigation of hemorheological parameters in periodontal diseases	Did not fulfill criteria for periodontitis
Sert 2011	Serum placental growth factor, vascular endothelial growth factor, soluble vascular endothelial growth factor receptor-1 and -2 levels in periodontal disease, and adverse pregnancy outcomes.	Other primary disease/condition
Sete 2015	Serum adipokine levels and their relationship with fatty acids in patients with chronic periodontitis.	No periodontally healthy control group
Sezer 2012	Serum cytokine levels and periodontal parameters in ankylosing spondylitis.	Other primary disease/condition
Shaddox 2011	Local inflammatory markers and systemic endotoxin in aggressive periodontitis.	Wrong study population/design
Shaddox 2016	Localized aggressive periodontitis immune response to healthy and diseased subgingival plaque.	Wrong study population/design

SUPPLEMENTARY DATA

Shah 2018	Role of cytokines and neutrophil infiltration in adults and juvenile forms of periodontitis	Full text not available/wrong language
Shah 2023	Effect of non-surgical therapy on plasma C-reactive protein levels in patients with periodontitis: A single arm prospective clinical trial.	Did not fulfill criteria for periodontitis
Shamaei-Tousi 2007	Differential regulation of circulating levels of molecular chaperones in patients undergoing treatment for periodontal disease.	Plasma/whole blood analyzed
Shamsoddin 2021	Is periodontitis associated with the severity of COVID-19?	Wrong study population/design
Shankar 2018	Assessment of serum ceruloplasmin levels in gingivitis, chronic and aggressive periodontitis patients- a clinico-biochemical study	Did not fulfill criteria for periodontitis
Shankar 2023	Variations of Serum CRP Levels in Periodontal Health and Diseases: A Clinico-Biochemical Study.	Analyte out of scope
Shanmugam 2018	Immunomodulatory effects of ω 3-fatty acids on the progression and treatment of periodontal disease	Full text not available/wrong language
Shannon 1964	Serum total protein, albumin, and globulin in relation to periodontal status and caries experience	Full text not available/wrong language
Shanyoor 2021	Estimation of crp and il-6 in the blood of periodontitis in iraqi patients	Full text not available/wrong language
Shaqman 2010	Periodontitis and inflammatory markers in transplant recipients.	Other primary disease/condition
Sharma 2014	A study of C-reactive protein, lipid metabolism and peripheral blood to identify a link between periodontitis and cardiovascular disease.	Did not fulfill criteria for periodontitis
Shelburne 2008	Serum antibodies to Porphyromonas gingivalis chaperone HtpG predict health in periodontitis susceptible patients.	Analyte out of scope
Shetty 2013	A clinico-biochemical evaluation of the role of a herbal (Ayurvedic) immunomodulator in chronic periodontal disease: a pilot study.	Analyte out of scope
Shetty 2016	A Comparative Evaluation of Serum Magnesium in Diabetes Mellitus Type 2 Patients with and without Periodontitis - A Clinico-biochemical Study.	Analyte out of scope
Shetty 2017	A comparative assessment of serum Vitamin C and serum lead among periodontitis and diabetic patient	Analyte out of scope
Shi 2008	Systemic inflammation markers in patients with aggressive periodontitis: a pilot study.	Analyte out of scope
Shi 2015	Association between plasma leptin level and systemic inflammatory markers in patients with aggressive periodontitis.	Plasma/whole blood analyzed
Shimada 2016	Expression of anti-Porphyromonas gingivalis peptidylarginine deiminase immunoglobulin G and peptidylarginine deiminase-4 in patients with rheumatoid arthritis and periodontitis.	Other primary disease/condition
Shin 2013	Antibody and T cell responses to Fusobacterium nucleatum and Treponema denticola in health and chronic periodontitis.	Analyte out of scope
Shirmohamadi 2016	Effect of non-surgical periodontal treatment on transferrin serum levels in patients with chronic periodontitis.	Analyte out of scope
Shirmohammadi 2013	The Effects of One-Stage Full-Mouth Disinfection and Quadrant-Wise Scaling and Root Planing on Serum Levels of IL-17 and IL-1 β and Clinical Parameters (A randomized Controlled Trial Study).	No periodontally healthy control group
Shirmohammadi 2018	Effect of non-surgical periodontal treatment on serum albumin levels in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Shivaprasad 2015	Correlation of the interleukin-29 levels in crevicular fluid and plasma with the genetic polymorphism in chronic and aggressive periodontitis patients.	Plasma/whole blood analyzed
Show 2022	Effect of nonsurgical periodontal therapy and smoking status on hematological variables related to anemia of chronic disease in chronic periodontitis patient: a case-control study.	No periodontally healthy control group
Shrestha 2015	Relationship between serologic markers of periodontal bacteria and metabolic syndrome and its components.	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Sims 1972	Lack of association between haemophili and human periodontal disease	Full text not available/wrong language
Sims 1998	Antigenic variation and cross-reactivity in <i>Bacteroides forsythus</i> clinical isolates detected by western blot.	Did not fulfill criteria for periodontitis
Sims 2001	Immunoglobulin G response of periodontitis patients to <i>Porphyromonas gingivalis</i> capsular carbohydrate and lipopolysaccharide antigens.	Did not fulfill criteria for periodontitis
Sims 2001	Treatment outcome for IDDM patients in relation to glutamic acid decarboxylase autoantibodies and serum IgG to periodontal pathogens.	Other primary disease/condition
Sims 2002	Serum IgG to heat shock proteins and <i>Porphyromonas gingivalis</i> antigens in diabetic patients with periodontitis.	Analyte out of scope
Sincar 2017	The biochemical effects of non-surgical periodontal therapy in patients with and without chronic renal disease	Did not fulfill criteria for periodontitis
Şincar 2019	Evaluation of clinical and biological parameters concerning the implications of smoking on the periodontium	Full text not available/wrong language
Singer 2009	Association of systemic oxidative stress with suppressed serum IgG to commensal oral biofilm and modulation by periodontal infection.	Did not fulfill criteria for periodontitis
Singer 2015	Oxidative Stress and IgG Antibody Modify Periodontitis-CRP Association.	Did not fulfill criteria for periodontitis
Singh 2017	Effect of scaling & root planing on the activity of ALP in GCF & serum of patients with gingivitis, chronic and aggressive periodontitis: A comparative study.	Did not fulfill criteria for periodontitis
Singh 2021	Evaluation of Inflammatory Acute Phase Protein Level and Different Leukocyte Counts in Chronic Periodontitis Normolipidemic Patients after Nonsurgical Periodontal Therapy.	Analyte out of scope
Singh 2022	Evaluation of serum interleukin-33 and soluble suppression of tumorigenicity 2 (sST2) receptors in patients with and without periodontal disease.	Did not fulfill criteria for periodontitis
Singhal 2016	Human soluble receptor for advanced glycation end products and tumor necrosis factor- α as gingival crevicular fluid and serum markers of inflammation in chronic periodontitis and type 2 diabetes.	Did not fulfill criteria for periodontitis
Singhal 2024	Effect of cyproterone acetate/ethinyl estradiol combination on periodontal status and high-sensitivity C-reactive protein levels in women with polycystic ovary syndrome: a cross-sectional study	Full text not available/wrong language
Sinha 2022	Orofacial Features and Their Correlation in Cardiovascular Diseases.	Did not fulfill criteria for periodontitis
Siqueira 2013	Effects of non-surgical periodontal treatment on the L-arginine-nitric oxide pathway and oxidative status in platelets	Analyte out of scope
Siriya 2019	Comparative evaluation of periodontal status & il-6 levels in chronic kidney disease patients and healthy individuals	Did not fulfill criteria for periodontitis
Sitompul 2023	Analysis of the Effects of IL-6 -572 C/G, CRP -757 A/G, and CRP -717 T/C Gene Polymorphisms; IL-6 Levels; and CRP Levels on Chronic Periodontitis in Coronary Artery Disease in Indonesia	Did not fulfill criteria for periodontitis
Sjöström 1992	Opsonic antibody activity against <i>Actinobacillus actinomycetemcomitans</i> in patients with rapidly progressive periodontitis.	Analyte out of scope
Sjöström 1994	Effect of treatment on titer, function, and antigen recognition of serum antibodies to <i>Actinobacillus actinomycetemcomitans</i> in patients with rapidly progressive periodontitis.	Analyte out of scope
Skaleric 1987	Alpha 2-macroglobulin in the sera of patients with periodontal disease.	Full text not available/wrong language
Skalerič 1987	α 2-macroglobulin in the sera of patients with periodontal disease	Full text not available/wrong language
Skaleric 2012	Periodontal inflammatory burden correlates with C-reactive protein serum level.	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Slade 2000	Acute-phase inflammatory response to periodontal disease in the US population.	Other primary disease/condition
Slade 2003	Relationship between periodontal disease and C-reactive protein among adults in the Atherosclerosis Risk in Communities study.	Did not fulfill criteria for periodontitis
Slaney 2002	Recognition of the carbohydrate modifications to the RgpA protease of Porphyromonas gingivalis by periodontal patient serum IgG.	Analyte out of scope
Šmiga 2023	Hemophore-like proteins produced by periodontopathogens are recognized by the host immune system and react differentially with IgG antibodies.	Analyte out of scope
Smirnova 2024	Predicting the course of localized periodontitis of traumatic etiology after complex treatment	Did not fulfill criteria for periodontitis
Smirnova 2024	Changes in the level of C-reactive protein depending on the severity of localized periodontitis of traumatic etiology	Full text not available/wrong language
Smith 1985	Salivary IgA antibody to Actinobacillus actinomycetemcomitans in a young adult population	Full text not available/wrong language
Smith 1995	Analysis of cultivable Porphyromonas gingivalis with trypsin-like protease enzyme activity and serum antibodies in chronic adult periodontitis.	Full text not available/wrong language
Socransky 1982	An approach to the definition of periodontal disease syndromes by cluster analysis.	Full text not available/wrong language
SolisACO 2016	Evaluation of periodontitis in hospital outpatients with major depressive disorder. A focus on gingival and circulating cytokines.	Other primary disease/condition
Solomon 2016	The effect of non-surgical therapy on C reactive protein and IL-6 serum levels in patients with periodontal disease and atherosclerosis	Other primary disease/condition
Song 2016	GC Gene Polymorphisms and Vitamin D-Binding Protein Levels Are Related to the Risk of Generalized Aggressive Periodontitis	Analyte out of scope
Song 2023	Relationship between circulating senescence-associated secretory phenotype levels and severity of type 2 diabetes-associated periodontitis: A cross-sectional study.	Did not fulfill criteria for periodontitis
Sonoki 2006	Decreased lipid peroxidation following periodontal therapy in type 2 diabetic patients	Did not fulfill criteria for periodontitis
Soronzonbold 2024	Measurement of atherosclerosis markers in individuals with periodontitis.	Analyte out of scope
Sosnin 2018	The nt-probnp in saliva and blood serum in norm and under periodontitis	Full text not available/wrong language
Sosnin 2019	TNE CONTENT OF VASCULAR ENDOTHELIAL GROW FACTOR IN SALIVA AND SERUM IN PATIENTS WITH PERIODONTITIS	Full text not available/wrong language
Soto-Barreras 2013	Peripheral arterial disease associated with caries and periodontal disease.	Other primary disease/condition
Souza 2020	Association of IL16 polymorphisms with periodontitis in Brazilians: A case- control study.	Other reason for exclusion
SravyaMVN 2019	Efficacy of an herbal antioxidant as an adjunct to nonsurgical periodontal therapy on procalcitonin levels in smokers with chronic periodontitis.	Did not fulfill criteria for periodontitis
Sreeram 2014	Lipid profile and marker of inflammation in chronic periodontitis	Analyte out of scope
Sreeram 2015	Is gamma-glutamyl transpeptidase a biomarker for oxidative stress in periodontitis?	Analyte out of scope
Srinivasan 2020	Estimation and comparison of the levels of elastase in Saliva, GCF & serum of smokers and non-smokers with chronic periodontitis - A clinico-biochemical study	Full text not available/wrong language
Stavaru 2005	Microbiological and immunological study of staphylococcus vaccine effects in periodontitis.	Did not fulfill criteria for periodontitis
Stefanov 2020	Serum acpa in periodontitis associated with rheumatoid arthritis - Relative value for the severity of periodontitis	Other primary disease/condition
Stein 2013	Failure to detect an association between aggressive periodontitis and the prevalence of herpesviruses.	Analyte out of scope
Storjord 2022	Dental and Periodontal Health in Acute Intermittent Porphyria.	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Struppek 2021	Periodontitis, dental plaque, and atrial fibrillation in the Hamburg City Health Study	No periodontally healthy control group
Su 2020	CD40 up-regulation on dendritic cells correlates with Th17/Treg imbalance in chronic periodontitis in young population	Did not fulfill criteria for periodontitis
Subha 2017	Periodontal Therapy with 0.25% Lemongrass Oil Mouthwash in Reducing Risk of Cardiovascular Diseases: A 3-Arm Prospective Parallel Experimental Study.	Analyte out of scope
Suchetha 2013	Adrenomedullin, periodontitis, diabetes-unraveling the equivocal relationship: A clinicobiochemical cross-sectional study.	Did not fulfill criteria for periodontitis
Sugi 2011	Prognosis of periodontitis recurrence after intensive periodontal treatment using examination of serum IgG antibody titer against periodontal bacteria.	Did not fulfill criteria for periodontitis
Sugita 2012	Association of the FcγRIIB-nt645+25A/G polymorphism with the expression level of the FcγRIIB receptor, the antibody response to Porphyromonas gingivalis and the severity of periodontitis.	Analyte out of scope
Sun 2009	Elevation of C-reactive protein and interleukin-6 in plasma of patients with aggressive periodontitis.	Plasma/whole blood analyzed
Sun 2011	Analysis of plasma calprotectin and polymorphisms of S100A8 in patients with aggressive periodontitis.	Plasma/whole blood analyzed
Sun 2023	Clinical study on Guchi Powder combined with galculus bovis and metronidazole in treatment of chronic periodontitis	Full text not available/wrong language
Sundar 2013	Comparison of the salivary and the serum nitric oxide levels in chronic and aggressive periodontitis: a biochemical study.	Analyte out of scope
Sundaram 2023	Effect of Non-Surgical Periodontal Therapy on Systemic Inflammatory Markers, Glycemic Status and Levels of Proteinuria in Type 2 Diabetic and Non-Diabetic Patients With Chronic Periodontitis.	Analyte out of scope
Suragimath 2021	Effect of non-surgical periodontal therapy on salivary and serum leptin levels in patients with generalized stage ii grade b periodontitis	No periodontally healthy control group
Suresh 2019	Effect of Non-Surgical Periodontal Therapy on the Serum Sialic Acid Levels in Diabetic Patients with Periodontitis.	Analyte out of scope
Suriyanarayanan 2023	Effect of Full Mouth Disinfection on Serum Ferritin Level in Periodontitis Patients: An Interventional Study	No periodontally healthy control group
Susanto 2012	Periodontal inflamed surface area and C-reactive protein as predictors of HbA1c: a study in Indonesia.	Did not fulfill criteria for periodontitis
Susanto 2013	Prevalence and severity of periodontitis in Indonesian patients with rheumatoid arthritis.	Analyte out of scope
Suvan 2021	Effect of Treatment of Periodontitis on Incretin Axis in Obese and Nonobese Individuals: A Cohort Study.	No periodontally healthy control group
Suzuki 2020	Detection of hepatocyte growth factor in oral rinses using water for possible periodontal diagnosis.	Did not fulfill criteria for periodontitis
Svärd 2020	Antibodies to citrullinated peptides in serum and saliva in patients with rheumatoid arthritis and their association to periodontitis.	Other primary disease/condition
Svärd 2023	Antibodies against Porphyromonas gingivalis in serum and saliva and their association with rheumatoid arthritis and periodontitis. Data from two rheumatoid arthritis cohorts in Sweden.	Other primary disease/condition
Sweier 2009	Immunoglobulin G (IgG) class, but not IgA or IgM, antibodies to peptides of the Porphyromonas gingivalis chaperone HtpG predict health in subjects with periodontitis by a fluorescence enzyme-linked immunosorbent assay	Analyte out of scope
Swoboda 2008	Correlates of periodontal decline and biologic markers in older adults.	Did not fulfill criteria for periodontitis
Syed 2020	Evaluation of deoxyperidinoline levels in gingival crevicular fluid and serum as alveolar bone loss biomarker in patients with periodontitis.	Analyte out of scope

SUPPLEMENTARY DATA

Syniachenko 2020	Clinical and pathogenetic features of the joint syndrome in rheumatoid arthritis with comorbid periodontitis	Full text not available/wrong language
Söder 2006	Levels of matrix metalloproteinases-8 and -9 with simultaneous presence of periodontal pathogens in gingival crevicular fluid as well as matrix metalloproteinase-9 and cholesterol in blood.	Did not fulfill criteria for periodontitis
Söder 2009	Matrix metalloproteinase-9 and tissue inhibitor of matrix metalloproteinase-1 in blood as markers for early atherosclerosis in subjects with chronic periodontitis.	Did not fulfill criteria for periodontitis
Sørensen 2009	Aggressive periodontitis and chronic arthritis: blood mononuclear cell gene expression and plasma protein levels of cytokines and cytokine inhibitors.	Plasma/whole blood analyzed
Tabeta 2000	Elevated humoral immune response to heat shock protein 60 (hsp60) family in periodontitis patients.	Full text not available/wrong language
Tabeta 2001	Characterization of serum antibody to Actinobacillus actinomycetemcomitans GroEL-like protein in periodontitis patients and healthy subjects.	Did not fulfill criteria for periodontitis
Tabeta 2018	Increased serum PCSK9, a potential biomarker to screen for periodontitis, and decreased total bilirubin associated with probing depth in a Japanese community survey.	Did not fulfill criteria for periodontitis
Taheri 2022	Transcript levels of cytokine coding genes in peripheral blood and tissues of patients with periodontitis.	Serum not analyzed
Taylor 2023	Comparison of serum nitric oxide, sialic acid and alkaline phosphatase in type 2 DM patients with and without chronic periodontitis	Did not fulfill criteria for periodontitis
Takahashi 1994	Assessment of interleukin-6 in the pathogenesis of periodontal disease.	Did not fulfill criteria for periodontitis
Takahashi 1998	Dynamics of serum immunoglobulin G avidity for Porphyromonas gingivalis in adult periodontitis.	Did not fulfill criteria for periodontitis
Takahashi 2001	Subgingival microflora and antibody responses against periodontal bacteria of young Japanese patients with type 1 diabetes mellitus.	Full text not available/wrong language
Takahashi 2001	Heterogeneity of host immunological risk factors in patients with aggressive periodontitis.	Did not fulfill criteria for periodontitis
Takami 2003	Blood test values and Community Periodontal Index scores in medical checkup recipients.	Did not fulfill criteria for periodontitis
Takeuchi 2006	Immunoglobulin G subclass antibody profiles in Porphyromonas gingivalis-associated aggressive and chronic periodontitis patients.	Analyte out of scope
Takeuchi-Hatanaka 2008	Polymorphisms in the 5' flanking region of IL12RB2 are associated with susceptibility to periodontal diseases in the Japanese population.	Analyte out of scope
Tamaki 2011	Periodontal treatment decreases plasma oxidized LDL level and oxidative stress.	Analyte out of scope
Tamaki 2014	Oxidative stress and antibody levels to periodontal bacteria in adults: the Nagasaki Islands study.	Analyte out of scope
Tang 2011	Alterations of serum lipid and inflammatory cytokine profiles in patients with coronary heart disease and chronic periodontitis: a pilot study.	Did not fulfill criteria for periodontitis
Tang 2019	The potentiality of salivary peptide biomarkers for screening patients with periodontal diseases by mass spectrometry.	Analyte out of scope
Tangada 1997	The effect of smoking on serum IgG2 reactive with Actinobacillus actinomycetemcomitans in early-onset periodontitis patients.	Analyte out of scope
Tani 1995	Extracellular antigens of Actinobacillus actinomycetemcomitans Y4 in severe alveolar bone loss patients studied by two-dimensional electrophoresis and western blots.	Analyte out of scope
Tanner 1996	Clinical, microbiological and immunological profile of healthy, gingivitis and putative active periodontal subjects.	Full text not available/wrong language
Tanner 2000	Serum IgG reactivity to subgingival bacteria in initial periodontitis, gingivitis and healthy subjects.	Did not fulfill criteria for periodontitis
Tar 2021	Salivary citrullinated proteins in rheumatoid arthritis and associated periodontal disease.	Other primary disease/condition

SUPPLEMENTARY DATA

Tasdemir 2018	The effect of periodontal disease treatment in patients with continuous ambulatory peritoneal dialysis	No periodontally healthy control group
Taspinar 2020	The role of HBD-2, HBD-3, and calprotectin in the relationship between chronic periodontitis and atherosclerosis	No periodontally healthy control group
Taubman 1992	Longitudinal monitoring of humoral antibody in subjects with destructive periodontal diseases.	Full text not available/wrong language
Taylor 2006	Full-mouth tooth extraction lowers systemic inflammatory and thrombotic markers of cardiovascular risk.	No periodontally healthy control group
Taylor 2010	The effect of initial treatment of periodontitis on systemic markers of inflammation and cardiovascular risk: a randomized controlled trial.	No periodontally healthy control group
Tayman 2018	A Novel Systemic Indicator of Periodontal Tissue Damage: Ischemia Modified Albumin.	Full text not available/wrong language
Tebloeva 2014	Differences in immune response to Porphyromonas gingivalis.	Full text not available/wrong language
Tebloeva 2015	Differences in immune response to Porphyromonas gingivalis	Did not fulfill criteria for periodontitis
Techatanawat 2020	Salivary and serum interleukin-17A and interleukin-18 levels in patients with type 2 diabetes mellitus with and without periodontitis.	Did not fulfill criteria for periodontitis
Teeuw 2015	A Lead ANRIL Polymorphism Is Associated with Elevated CRP Levels in Periodontitis: A Pilot Case-Control Study.	Analyte out of scope
TeixeiraFCF 2020	Relationship between periodontitis and subclinical risk indicators for chronic non-communicable diseases.	Did not fulfill criteria for periodontitis
Teles 2012	Relationships among interleukin-6, tumor necrosis factor- α , adipokines, vitamin D, and chronic periodontitis.	Did not fulfill criteria for periodontitis
Teles 2012	Relationships among interleukin-6, tumor necrosis factor- α , adipokines, vitamin D, and chronic periodontitis	No periodontally healthy control group
TelesFRF 2024	Salivary and serum inflammatory biomarkers during periodontitis progression and after treatment.	Other reason for exclusion
Tew 1985	Relationship between gingival crevicular fluid and serum antibody titers in young adults with generalized and localized periodontitis.	Analyte out of scope
Tew 1985	Serum antibody reactive with predominant organisms in the subgingival flora of young adults with generalized severe periodontitis.	Analyte out of scope
Thakare 2010	Evaluation of the C-reactive protein serum levels in periodontitis patients with or without atherosclerosis.	Analyte out of scope
Thanakun 2014	Association of untreated metabolic syndrome with moderate to severe periodontitis in Thai population.	Other primary disease/condition
Thanakun 2016	Inverse Association of Plasma IgG Antibody to Aggregatibacter actinomycetemcomitans and High C-Reactive Protein Levels in Patients with Metabolic Syndrome and Periodontitis.	Did not fulfill criteria for periodontitis
Thanakun 2016	Effect of Periodontitis on Adiponectin, C-Reactive Protein, and Immunoglobulin G Against Porphyromonas gingivalis in Thai People With Overweight or Obese Status.	Other primary disease/condition
Thanakun 2017	Increased oral inflammation, leukocytes, and leptin, and lower adiponectin in overweight or obesity.	Did not fulfill criteria for periodontitis
Thanoon 2023	Role of 1,25(OH) $_2$ D On Cytochromes CYP27A1 and CYP27B1 in Periodontitis: A Clinical Study	Did not fulfill criteria for periodontitis
Thé 1991	Rheumatoid factor (RF) distribution in periodontal disease.	Did not fulfill criteria for periodontitis
Thomas 2010	Comparative evaluation of micronutrient status in the serum of diabetes mellitus patients and healthy individuals with periodontitis.	Analyte out of scope
Thomas 2019	A comparative evaluation of the micronutrient profile in the serum of diabetes mellitus Type II patients and healthy individuals with periodontitis.	Analyte out of scope
Thomas 2021	Assessment of the antioxidant levels in sera of periodontitis patients with or without diabetes mellitus	Full text not available/wrong language

SUPPLEMENTARY DATA

Thomas 2024	Association between metabolic syndrome and salivary MMP-8, myeloperoxidase in periodontitis.	Analyte out of scope
Tian 2013	Association of cytokines, high sensitive C-reactive protein, VEGF and beta-defensin-1 gene polymorphisms and their protein expressions with chronic periodontitis in the Chinese population.	Plasma/whole blood analyzed
Tinoco 1997	Attachment loss and serum antibody levels against autologous and reference strains of Actinobacillus actinomycetemcomitans in untreated localized juvenile periodontitis patients	Wrong study population/design
Tollefsen 1980	Comparative analysis of gingival fluid and plasma by crossed immunoelectrophoresis	Full text not available/wrong language
Tollefsen 1986	Cross-sectional study of the effects of immunosuppressive agents on humoral immune responses to 6 oral microorganisms in humans	Full text not available/wrong language
Tolo 1989	Antigens released from four oral bacteria in periodontitis.	Analyte out of scope
Tolo 1990	Serum antibodies and loss of periodontal bone in patients with rheumatoid arthritis.	Full text not available/wrong language
Tonetti 2007	Treatment of periodontitis and endothelial function.	No periodontally healthy control group
Torrunguang 2018	Mediation analysis of systemic inflammation on the association between periodontitis and glycaemic status.	Analyte out of scope
Torrunguang 2019	Periodontitis is associated with elevated serum levels of cardiac biomarkers-Soluble ST2 and C-reactive protein.	No periodontally healthy control group
Torrunguang 2024	Periodontitis and hypertension are linked through systemic inflammation: A 5-year longitudinal study.	Did not fulfill criteria for periodontitis
Torumtay 2016	Effects of periodontal treatment on inflammation and oxidative stress markers in patients with metabolic syndrome.	Other primary disease/condition
TorumtayCin 2024	The effects of severe periodontitis on arterial stiffness using cardio-ankle vascular index in patients with type 2 diabetes.	Analyte out of scope
Toy 2023	Obesity as a modifying factor of periodontal therapy outcomes: local and systemic adipocytokines and oxidative stress markers.	No periodontally healthy control group
Trindade 2008	Serum antibody levels against Porphyromonas gingivalis extract and its chromatographic fraction in chronic and aggressive periodontitis.	Analyte out of scope
Tripathi 2018	Assessment of Lipid Peroxidation Levels and Total Antioxidant Status in Chronic and Aggressive Periodontitis Patients: An in vivo Study.	Analyte out of scope
Tsai 2021	Associations between metabolic biomarkers and localized stage II/III periodontitis in young adults: The CHIEF Oral Health study.	Analyte out of scope
Tsai 2023	Non-Insulin-Based Insulin Resistance Indices and Localized Periodontitis in Physically Active Young Male Adults: CHIEF Oral Health Study	Full text not available/wrong language
Tsioufis 2011	Periodontal disease severity and urinary albumin excretion in middle-aged hypertensive patients.	Other primary disease/condition
Tsoupras 2006	Isolation and identification of hydroxyl-platelet-activating factor from natural sources.	Did not fulfill criteria for periodontitis
Tsutsumi 2009	Mannose binding lectin gene polymorphism and the severity of chronic periodontitis	Did not fulfill criteria for periodontitis
Turkmen 2024	Neopterin, 7,8-dihydroneopterin, total neopterin levels and their ratio in periodontitis: New dilemma.	Analyte out of scope
Turner 1989	Serum and gingival tissue antibody levels to oral microbial antigens in human chronic adult periodontitis.	Full text not available/wrong language
Tüter 2007	Evaluation of gingival crevicular fluid and serum levels of high-sensitivity C-reactive protein in chronic periodontitis patients with or without coronary artery disease.	Analyte out of scope
Tüter 2010	Effects of scaling and root planing and subantimicrobial dose doxycycline on gingival crevicular fluid levels of matrix metalloproteinase-8, -13 and serum levels of HsCRP in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Tzagaroulaki 1999	Antibodies to <i>Treponema pallidum</i> in serum from subjects with periodontitis: relationship to pathogen-related oral spirochetes.	Did not fulfill criteria for periodontitis
Unriza-Puin 2017	Are obesity, ACPAs and periodontitis conditions that influence the risk of developing rheumatoid arthritis in first-degree relatives?	Other primary disease/condition
Unsal 1996	The effects of periodontal therapy on serum antibody levels to <i>Actinobacillus actinomycetemcomitans</i> and <i>Porphyromonas gingivalis</i> (part II).	Full text not available/wrong language
Unsal 1996	Serum antibodies to <i>Actinobacillus actinomycetemcomitans</i> and <i>Porphyromonas gingivalis</i> in juvenile periodontitis and adult periodontitis (part I).	Analyte out of scope
Urquía 1995	Induction of interleukin-1 alpha production by <i>Porphyromonas gingivalis</i> in mononuclear blood cell cultures from periodontitis patients.	Did not fulfill criteria for periodontitis
Ushida 2008	Changes in serum interleukin-6, C-reactive protein and thrombomodulin levels under periodontal ultrasonic debridement.	No periodontally healthy control group
Vadakkettical 2017	Does periodontal inflammation affect glycosylated haemoglobin level in otherwise systemically healthy individuals? - A hospital based study.	Analyte out of scope
Vahid 2012	C-reactive protein levels in chronic gingivitis, chronic periodontitis and periodontally healthy subjects	Full text not available/wrong language
ValiyaveetilKarattil 2022	Evaluation of serum concentrations of hs-CRP and Hb in varying severities of chronic periodontitis.	Did not fulfill criteria for periodontitis
Vargas-Villafuerte 2016	Preliminary Results of Non-Surgical Periodontal Treatment in Patients With Breast Cancer Undergoing Chemotherapy.	Analyte out of scope
Veljović 2020	The influence of periodontal disease treatment on 8-hydroxy-deoxyguanosine concentrations in saliva and plasma of chronic periodontitis patients	Plasma/whole blood analyzed
Vijayakumar 2020	Effect of Nonsurgical Periodontal Therapy on Serum Levels of Interleukin-1 β and Interleukin-8 in Smokers and Nonsmokers with Chronic Periodontitis.	No periodontally healthy control group
Vilela 2011	Treatment of chronic periodontitis decreases serum prohepcidin levels in patients with chronic kidney disease.	Other primary disease/condition
Vilkuna-Rautiainen 2002	Antigenically diverse reference strains and autologous strains of <i>Actinobacillus actinomycetemcomitans</i> are equally efficient antigens in enzyme-linked immunosorbent assay analysis.	Analyte out of scope
Vincent 1985	Reaction of human sera from juvenile periodontitis, rapidly progressive periodontitis, and adult periodontitis patients with selected periodontopathogens.	Full text not available/wrong language
Vincent 1987	Effect of periodontal therapy on specific antibody responses to suspected periodontopathogens.	Full text not available/wrong language
Vinitha 2022	Serum and salivary adipokines in type 2 diabetes - Results of a pilot study in India.	Other primary disease/condition
Virtanen 2017	Salivary MMP-13 gender differences in periodontitis: A cross-sectional study from Sweden.	Did not fulfill criteria for periodontitis
Vlachojannis 2010	Determinants of serum IgG responses to periodontal bacteria in a nationally representative sample of US adults.	Analyte out of scope
Vrinda 2021	Effect of nonsurgical periodontal therapy on C-reactive protein and iron indices in hemodialysis patients	Analyte out of scope
Vuletic 2008	SAA and PLTP activity in plasma of periodontal patients before and after full-mouth tooth extraction.	No periodontally healthy control group
Wadia 2016	A pilot study of the gingival response when smokers switch from smoking to vaping.	Did not fulfill criteria for periodontitis
Waghmode 2024	Assessment and Comparison of 8-Hydroxy-2-Deoxyguanosine (8-OHdG) Levels in Saliva and Serum among Healthy Subjects, Periodontitis, and Oral Submucous Fibrosis (OSMF) Patients	Did not fulfill criteria for periodontitis
Wahi 2017	Assessment of levels of glycosylated hemoglobin in patients with periodontal pathologies: A comparative study	Analyte out of scope

SUPPLEMENTARY DATA

Wakai 1999	Associations of medical status and physical fitness with periodontal disease.	Did not fulfill criteria for periodontitis
Walther 2023	Association between periodontitis and depression severity – A cross-sectional study of the older population in Hamburg	No periodontally healthy control group
WanAbdulAzim 2024	The Effect of Periodontitis on Fibroblast Growth Factor 23 Levels in Predialysis Chronic Kidney Disease Patients.	Did not fulfill criteria for periodontitis
Wang 2003	Change of circulating TNF-alpha in patients with advanced periodontitis before and after periodontal initial therapy	Full text not available/wrong language
Wang 2005	Elevated serum IgG titer and avidity to Actinobacillus actinomycetemcomitans serotype c in Japanese periodontitis patients.	Analyte out of scope
Wang 2006	Antibody response after single-visit full-mouth ultrasonic debridement versus quadrant-wise therapy.	Analyte out of scope
Wang 2008	Molecular mimicry of Aggregatibacter actinomycetemcomitans with beta2 glycoprotein I.	Analyte out of scope
Wang 2013	Interaction between oral lichen planus and chronic periodontitis with Th17-associated cytokines in serum.	Did not fulfill criteria for periodontitis
Wang 2014	Plasma polyunsaturated fatty acids and periodontal recovery in Taiwanese with periodontitis: a significant relationship.	Analyte out of scope
Wang 2015	β 2-Glycoprotein I-Dependent Anti-Cardiolipin Antibodies Associated With Periodontitis in Patients With Systemic Lupus Erythematosus.	Other primary disease/condition
Wang 2015	β -glycoprotein I-dependent anti-cardiolipin antibodies associated with periodontitis in patients with systemic lupus erythematosus	Did not fulfill criteria for periodontitis
Wang 2019	Relationship between serum 25-hydroxyvitamin D(3) levels and severity of chronic periodontitis in type 2 diabetic patients: A cross-sectional study.	No periodontally healthy control group
Wang 2019	IL-18 promotes the secretion of matrix metalloproteinases in human periodontal ligament fibroblasts by activating NF- κ B signaling.	Did not fulfill criteria for periodontitis
Wang 2019	Effect of minocycline hydrochloride combined with periodontal therapy on serum inflammatory cytokines in patients with moderate-severe periodontitis	Full text not available/wrong language
Wang 2019	Association of CYP1A1 rs1048943 variant with aggressive periodontitis and its interaction with hyperlipidemia on the periodontal status	Analyte out of scope
Wang 2020	Expression characteristics of serum inflammatory factors in patients with chronic periodontitis and its clinical significance	Full text not available/wrong language
Wang 2021	Effect of Kangfuxin Liquid combined with Cydiodine Buccal Tablets in treatment of chronic periodontitis its effect on S100A12 and lactoferrin levels	Full text not available/wrong language
Wang 2021	Salivary IL17 and IL35 suppresses cell progression in periodontal disease manipulation induced by TNBs via NF- κ B signaling pathway IL17 and IL35 in periodontal disease and systemic osteoporosis	Did not fulfill criteria for periodontitis
Wang 2022	Pro-inflammatory profiles in cardiovascular disease patients with peri-implantitis.	Other primary disease/condition
Wang 2023	Associations of blood glucose, helper T cells and cytokine levels with degree of periodontal lesion in type 2 diabetes mellitus patients accompanied by chronic periodontitis.	Did not fulfill criteria for periodontitis
Wang 2024	Saliva, Plasma, and Multifluid Metabolomic Signatures of Periodontal Disease, Type 2 Diabetes Progression, and Markers of Glycemia and Dyslipidemia Among Puerto Rican Adults With Overweight and Obesity.	Other primary disease/condition
Wangerin 2019	Long-term Association of Periodontitis With Decreased Kidney Function	Full text not available/wrong language
Wanichkittikul 2021	Periodontal Treatment Improves Serum Levels of Leptin, Adiponectin, and C-Reactive Protein in Thai Patients with Overweight or Obesity.	No periodontally healthy control group

SUPPLEMENTARY DATA

WanMohamad 2017	Anti-cardiolipin antibodies in chronic periodontitis patients in Kelantan, Malaysia	Analyte out of scope
Watanabe 1989	Detection of immunodominant antigens of periodontopathic bacteria in human periodontal disease	Full text not available/wrong language
Wehmeyer 2013	A randomized controlled trial of intensive periodontal therapy on metabolic and inflammatory markers in patients With ESRD: results of an exploratory study.	Other primary disease/condition
Wheeler 1994	Modeling the relationship between clinical, microbiologic, and immunologic parameters and alveolar bone levels in an elderly population.	Did not fulfill criteria for periodontitis
White 2016	Peripheral blood neutrophil extracellular trap production and degradation in chronic periodontitis.	Plasma/whole blood analyzed
Whitney 1992	Serum immunoglobulin G antibody to Porphyromonas gingivalis in rapidly progressive periodontitis: titer, avidity, and subclass distribution.	Analyte out of scope
Widén 2016	Systemic inflammatory impact of periodontitis on acute coronary syndrome.	Other primary disease/condition
Willershausen 2009	Association between chronic dental infection and acute myocardial infarction.	Other primary disease/condition
Willershausen 2014	Association between chronic periodontal and apical inflammation and acute myocardial infarction.	Did not fulfill criteria for periodontitis
Wilson 1992	Immunoglobulin G subclass response of localized juvenile periodontitis patients to Actinobacillus actinomycetemcomitans Y4 lipopolysaccharide.	Wrong study population/design
Wilson 1995	Immunoglobulin G subclass response of juvenile periodontitis subjects to principal outer membrane proteins of Actinobacillus actinomycetemcomitans	Wrong study population/design
Wilson 2003	Bone turnover markers in serum and periodontal microenvironments.	Did not fulfill criteria for periodontitis
Wilton 1992	Elevated levels of the IgG2 subclass in serum from patients with a history of destructive periodontal disease. A case-control study.	Full text not available/wrong language
Wilton 1992	IgG subclass antibodies to Porphyromonas gingivalis in patients with destructive periodontal disease: A case: control study	Full text not available/wrong language
Wilton 1993	Elevated opsonic activity for Porphyromonas (Bacteroides) gingivalis in serum from patients with a history of destructive periodontal disease. A case: control study.	Full text not available/wrong language
Wilton 1993	Interleukin-1 beta and IgG subclass concentrations in gingival crevicular fluid from patients with adult periodontitis.	Full text not available/wrong language
Wilton 1993	Interleukin-1 β and IgG subclass concentrations in gingival crevicular fluid from patients with adult periodontitis	Full text not available/wrong language
Windisch 2012	A phase IIa randomized controlled pilot study evaluating the safety and clinical outcomes following the use of rhGDF-5/ β -TCP in regenerative periodontal therapy	No periodontally healthy control group
Winning 2015	The association between subgingival periodontal pathogens and systemic inflammation.	Analyte out of scope
Winning 2019	Chronic periodontitis and reduced respiratory function.	Analyte out of scope
Wojtkowska 2021	The inflammation link between periodontal disease and coronary atherosclerosis in patients with acute coronary syndromes: case-control study.	Other primary disease/condition
Wolf 2006	Fc γ receptor polymorphisms and periodontal status: A prospective follow-up study	Analyte out of scope
Wood 2004	The relationship between tomato intake and congestive heart failure risk in periodontitis subjects.	Analyte out of scope
Wu 2000	Examination of the relation between periodontal health status and cardiovascular risk factors: serum total and high density lipoprotein cholesterol, C-reactive protein, and plasma fibrinogen.	Full text not available/wrong language
Wu 2015	The association between the RAGE G82S polymorphism, sRAGE and chronic periodontitis in Taiwanese individuals with and without diabetes	Did not fulfill criteria for periodontitis

SUPPLEMENTARY DATA

Wu 2016	Periodontal diseases and carotid intima-media thickness in Bangladesh.	Other primary disease/condition
Wu 2021	Periodontal tissue regeneration combined with orthodontic treatment can improve clinical efficacy and periodontal function of patients with periodontitis	Did not fulfill criteria for periodontitis
Wu 2024	Alterations in the Salivary Microbiome and Metabolism in Patients With Carotid Atherosclerosis from Rural Northeast China.	Other primary disease/condition
Wu 2024	Exploring Maternally Expressed Gene 3 as a Diagnostic Biomarker in Chronic Periodontitis	Full text not available/wrong language
Wulandari 2023	The Relationship Between Interleukin-1 β Levels and Sociodemographic Factors With Periodontal Status in the Menopausal Transition	Full text not available/wrong language
Xiao 2021	Increased risk of periodontitis occurrence in patients with rheumatoid arthritis and its association with the levels of IL-1 β and TNF- α in gingival crevicular fluid.	Did not fulfill criteria for periodontitis
Xie 2023	Changes in serum Th17/Treg-related cytokine levels in periodontitis patients with Alzheimer's disease	Full text not available/wrong language
Xu 2022	Computed Tomography Three-Dimensional Reconstruction Algorithm in the Diagnosis of Periodontitis and Its Correlation with Hypertension.	Did not fulfill criteria for periodontitis
Xu 2023	Association between serum uric acid, hyperuricemia and periodontitis: a cross-sectional study using NHANES data.	Analyte out of scope
Xu 2024	Application of Cefaclor in Orthodontics through Micro-Implant Anchorage in Patients with Periodontitis.	Other primary disease/condition
Xynogala 2009	Evaluation of the humoral immune response to the cytolethal distending toxin of <i>Aggregatibacter actinomycetemcomitans</i> Y4 in subjects with localized aggressive periodontitis.	Wrong study population/design
Yadav 2020	An assessment of anti-citrullinated protein antibody in systemically healthy individuals with or without chronic periodontitis: A case-control study.	Analyte out of scope
Yadav 2021	Metallothionein levels in gingival crevicular fluid, saliva, and serum of smokers and non-smokers with chronic periodontitis.	Analyte out of scope
Yadav 2024	Effect of initial periodontal therapy on metallothionein levels in smokers and non-smokers with periodontitis.	Analyte out of scope
Yakar 2024	Salivary inflammatory burden in pre- and postmenopausal women: Associations with body mass index, patient-reported health, serum cytokines, and periodontal parameters	Other primary disease/condition
Yakob 2012	C-reactive protein in relation to early atherosclerosis and periodontitis.	Did not fulfill criteria for periodontitis
Yamabe 2008	Distribution of Archaea in Japanese patients with periodontitis and humoral immune response to the components.	Full text not available/wrong language
Yamazaki 2004	Effect of periodontal treatment on the serum antibody levels to heat shock proteins.	Did not fulfill criteria for periodontitis
Yamazaki 2005	Effect of periodontal treatment on the C-reactive protein and proinflammatory cytokine levels in Japanese periodontitis patients.	Did not fulfill criteria for periodontitis
Yamazaki 2007	Relationship of periodontal infection to serum antibody levels to periodontopathic bacteria and inflammatory markers in periodontitis patients with coronary heart disease.	Did not fulfill criteria for periodontitis
Yang 2015	Personal exposure to particulate matter and inflammation among patients with periodontal disease.	Analyte out of scope
Yang 2018	Significant association of rheumatoid arthritis-related inflammatory markers with non-surgical periodontal therapy.	No periodontally healthy control group
Yang 2022	Examining the association between serum IgG of oral bacteria and metabolic syndrome.	Analyte out of scope
Yang 2022	Th17/Treg balance and indoleamine 2,3 dioxygenase activity in periodontitis-associated atherosclerotic patients.	Plasma/whole blood analyzed

SUPPLEMENTARY DATA

Yang 2022	Effects of different periodontal splints combined with orthodontic treatment on facial aesthetics in patients with sector displacement of periodontitis teeth	Full text not available/wrong language
Yarov 2023	DIFFERENTIAL DRUG CORRECTION CYTOKINE AND PROSTAGLANDIN CONTENT IN BLOOD AND GINGIVAL FLUID IN GENERALIZED PERIODONTITIS AGAINST THE BACKGROUND OF DIFFERENT RESPONSIVENESS OF THE ORGANIZATION.	Did not fulfill criteria for periodontitis
Yarov 2023	DYNAMICS OF PRO- AND ANTI-INFLAMMATORY CYTOKINES IN PATIENTS WITH GENERALIZED PERIODONTITIS ACCOMPANIED BY DIFFERENT REACTIVITY OF THE ORGANISM.	Full text not available/wrong language
Yashima 2019	Biological responses following one-stage full-mouth scaling and root planing with and without azithromycin: Multicenter randomized trial.	No periodontally healthy control group
Yavuzylmaz 1992	Clinical and immunological characteristics of patients with rheumatoid arthritis and periodontal disease.	Did not fulfill criteria for periodontitis
Yavuzylmaz 1995	The gingival crevicular fluid interleukin-1 beta and tumour necrosis factor-alpha levels in patients with rapidly progressive periodontitis.	Full text not available/wrong language
Ye 2011	Mutations in the ELANE gene are associated with development of periodontitis in patients with severe congenital neutropenia.	Other primary disease/condition
Yeung 2002	IgG subclass specific antibody response to periodontopathic organisms in HIV-positive patients.	Did not fulfill criteria for periodontitis
Yıldırım 2013	Periodontal health and serum, saliva matrix metalloproteinases in patients with mild chronic obstructive pulmonary disease.	Other primary disease/condition
Yıldırım 2024	Serum vitamin D concentration is inversely associated with matrix metalloproteinase-9 level in periodontal diseases.	Analyte out of scope
Yilmaz 2023	Parkinson's disease is positively associated with periodontal inflammation.	Other reason for exclusion
Yokoyama 2014	Comparative analysis of serum proteins in relation to rheumatoid arthritis and chronic periodontitis.	Other reason for exclusion
Yoneda 2003	Humoral immune responses to S-layer-like proteins of <i>Bacteroides forsythus</i> .	Analyte out of scope
Yoneda 2019	Serum microRNAs and chronic periodontitis: A case-control study.	Analyte out of scope
Yoshihara 2009	Relation of bone turnover markers to periodontal disease and jaw bone morphology in elderly Japanese subjects	Did not fulfill criteria for periodontitis
Yoshihara 2014	The interaction between beta-3 adrenergic receptor polymorphism and obesity to periodontal disease in community-dwelling elderly Japanese	Other primary disease/condition
Yoshihara 2021	Interaction between and impact of IL-6 genotype and alpha-tocopherol levels on periodontal condition in aging individuals.	Did not fulfill criteria for periodontitis
Yoshii 2009	Temporal association of elevated C-reactive protein and periodontal disease in men.	Did not fulfill criteria for periodontitis
Yoshimura 1987	Detection of Specific Antibodies against Fimbriae and Membrane Proteins from the Oral Anaerobe <i>Bacteroides gingivalis</i> in Patients with Periodontal Diseases	Analyte out of scope
Yoshioka 2020	Association between Oral Health Status and Diabetic Nephropathy-Related Indices in Japanese Middle-Aged Men	Did not fulfill criteria for periodontitis
Yu 2023	Dynamics of pro- and anti-inflammatory cytokines in patients with generalized periodontitis accompanied by different reactivity of the organism	Other reason for exclusion
Yuan 2022	Peptidomic changes of saliva after non-surgical treatment of stage I/II generalized periodontitis.	Analyte out of scope
Yun 2007	Effects of surgical periodontal therapy on serum levels of TNF-alpha in patients with chronic periodontitis.	Did not fulfill criteria for periodontitis
Yusof 1995	Levels of serum IgG against <i>Porphyromonas gingivalis</i> in patients with rapidly progressive periodontitis, rheumatoid arthritis and adult periodontitis.	Analyte out of scope

SUPPLEMENTARY DATA

Zambon 1988	Microbiological and immunological studies of adult periodontitis in patients with noninsulin-dependent diabetes mellitus.	Full text not available/wrong language
Zein Elabdeen 2017	Cytokine profile in gingival crevicular fluid and plasma of patients with aggressive periodontitis.	Wrong study population/design
Zekeridou 2019	Systemic inflammatory burden and local inflammation in periodontitis: What is the link between inflammatory biomarkers in serum and gingival crevicular fluid?	No periodontally healthy control group
Žekonis 2016	Effect of Supraperiapical Irrigation with Aerosolized 0.5% Hydrogen Peroxide on Clinical Periodontal Parameters, Markers of Systemic Inflammation, and Morphology of Gingival Tissues in Patients with Periodontitis.	No periodontally healthy control group
Zeng 2024	The long-term effect of periodontitis treatment on changes in blood inflammatory markers in patients with generalized aggressive periodontitis.	Analyte out of scope
Zhan 2016	Platelet activation and platelet-leukocyte interaction in generalized aggressive periodontitis.	Plasma/whole blood analyzed
Zhan 2024	Proteome-Wide Mendelian Randomisation Identifies Causal Links of Plasma Proteins With Periodontitis.	Serum not analyzed
Zhang 2013	Elevation of vitamin D-binding protein levels in the plasma of patients with generalized aggressive periodontitis.	Plasma/whole blood analyzed
Zhang 2014	Vitamin d-binding protein levels in plasma and gingival crevicular fluid of patients with generalized aggressive periodontitis.	Analyte out of scope
Zhang 2017	Efficacy of combined orthodontic-periodontic treatment for patients with periodontitis and its effect on inflammatory cytokines: A comparative study.	Did not fulfill criteria for periodontitis
Zhang 2017	High-sensitivity C-reactive protein (hs-CRP) gene polymorphisms (rs1205 and rs2794520) associated with hs-CRP serum levels in periodontitis-associated chronic kidney disease patients from Uyghur adults	Full text not available/wrong language
Zhang 2020	Wisdom teeth, periodontal disease, and C-reactive protein in US adults.	Did not fulfill criteria for periodontitis
Zhang 2021	Effects of statins on cytokines levels in gingival crevicular fluid and saliva and on clinical periodontal parameters of middle-aged and elderly patients with type 2 diabetes mellitus.	Analyte out of scope
Zhang 2021	Expression profile of macrophage migration inhibitory factor in periodontitis.	Did not fulfill criteria for periodontitis
Zhang 2021	Clinical, inflammatory and microbiological outcomes of full-mouth scaling with adjunctive glycine powder air-polishing: A randomized trial.	No periodontally healthy control group
Zhang 2021	Clinical study of Jinzhi Jieyin Gargle combined with Metronidazole Buccal Tablets in treatment of periodontitis	Full text not available/wrong language
Zhang 2022	Study on the Effects of Orthodontics on Anterior Tooth Displacement in Patients.	Other reason for exclusion
Zhang 2022	Resveratrol decreases local inflammatory markers and systemic endotoxin in patients with aggressive periodontitis	Did not fulfill criteria for periodontitis
Zhang 2024	Evaluation of salivary interleukin-17 and developmental endothelial locus-1 in patients with periodontitis with and without type 2 diabetes mellitus.	Analyte out of scope
Zhang 2024	Association of periodontitis with all-cause and cause-specific mortality among individuals with depression: a population-based study.	Did not fulfill criteria for periodontitis
Zhao 2018	Association of periodontitis with rheumatoid arthritis and the effect of non-surgical periodontal treatment on disease activity in patients with rheumatoid arthritis	Did not fulfill criteria for periodontitis
Zhao 2019	microRNA-146a downregulates IL-17 and IL-35 and inhibits proliferation of human periodontal ligament stem cells.	Did not fulfill criteria for periodontitis
Zhao 2022	Salivary ACE2 and TMPRSS2 link to periodontal status and metabolic parameters	Other reason for exclusion

SUPPLEMENTARY DATA

Zhao 2024	Association between serum neurofilament light chain and periodontitis.	No periodontally healthy control group
Zheng 2006	Periodontal parameters and platelet-activating factor levels in serum and gingival crevicular fluid in a Chinese population	Did not fulfill criteria for periodontitis
Zheng 2021	Evaluation of the Efficacy of Minocycline Hydrochloride and Metro-nidazole in the Treatment of Chronic Periodontitis	Full text not available/wrong language
Zhou 2017	Effect of intensive periodontal therapy on blood pressure and endothelial microparticles in patients with prehypertension and periodontitis: A randomized controlled trial	Other primary disease/condition
Zhou 2021	Down-regulated IL36RN expression based on peripheral blood mononuclear cells and plasma of periodontitis patients and its clinical significance.	Wrong study population/design
Zhu 2015	Inflammatory cytokine levels in patients with periodontitis and/or coronary heart disease.	Did not fulfill criteria for periodontitis
Zhu 2022	Association of high-density lipoprotein cholesterol and periodontitis severity in Chinese elderly: a cross-sectional study	Analyte out of scope
Ziebolz 2007	Periodontal findings and blood analysis of blood donors: a pilot study.	Did not fulfill criteria for periodontitis
Ziebolz 2019	Diabetes screening in dental practice using the find-risk questionnaire - a practice-based pilot study	Other primary disease/condition
Zope 2020	Assessment of non- Surgical periodontal therapy on plasma homocysteine levels in chronic periodontitis	Full text not available/wrong language
Zuhair 2016	New term (SNPs-genotypes combination principal) gives better understanding about effect of SNPs on the concentration of IL-1 β and TNF α in clinical samples of periodontitis	Did not fulfill criteria for periodontitis
Zuza 2011	The role of obesity as a modifying factor in patients undergoing non-surgical periodontal therapy.	No periodontally healthy control group
Zuza 2016	Lipid profile and high-sensitivity C-reactive protein levels in obese and non-obese subjects undergoing non-surgical periodontal therapy.	Analyte out of scope
Önder 2017	Impact of non-surgical periodontal therapy on saliva and serum levels of markers of oxidative stress.	Analyte out of scope
ÖngözDede 2016	The effect of initial periodontal treatment on plasma, gingival crevicular fluid and salivary levels of 8-hydroxy-deoxyguanosine in obesity	Analyte out of scope
ÖngözDede 2021	Increased levels of interleukin-32 isoforms alpha, beta, gamma, and delta in the gingival crevicular fluid and plasma of the patients with periodontitis.	Plasma/whole blood analyzed
Özçaka 2010	Association between mannose-binding lectin levels and gene polymorphisms in chronic periodontitis and response to treatment	Plasma/whole blood analyzed
Özçaka 2011	Plasma levels of C-telopeptide pyridinoline cross-links of type I collagen and osteocalcin in chronic periodontitis	Plasma/whole blood analyzed
Özçaka 2013	Is interleukin-17 involved in the interaction between polycystic ovary syndrome and gingival inflammation?	Other primary disease/condition
Özdemir 2024	Can delta neutrophil index values predict the success of periodontal treatment in patients with periodontitis?	Analyte out of scope

Supplementary Table 5. Risk of bias assessment of included studies

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars	
		1	2	3	4			1	2		
1	Abdul-Wahab 2024	*	*		**	**			*	*	8*
2	Abuhussein 2014	*	*		**	*			*	*	7*
3	Acharya 2015	*	*		**	*			*	*	7*
4	Acharya 2016	*			**	**			*	*	7*
5	Acharya 2019	*			**	**			*	*	7*
6	Acharya 2022	*			**	**			*	*	7*
7	Acharya 2024	*	*		**	*			*	*	7*
8	Ahuja 2019	*	*		**	*			*	*	7*
9	Al-Kubaisi 2024	*	*		**				*	*	6*
10	Al-Obaidi 2023	*			**	*			*	*	6*
11	Albandar 2002	*			**	*			*	*	6*
12	Aldahlawi 2018	*			**				*	*	5*
13	Aldahlawi 2019				**	*			*	*	5*
14	Alkan 2019	*	*		**	**			*	*	8*
15	Anil 2013		*		**	*			*	*	6*
16	Anumala 2016	*			**	*			*	*	6*
17	Arief 2017	*	*		**	*			*	*	7*
18	Arikan 2023	*	*		**	*			*	*	7*
19	Arvikar 2021	*	*		**	*			*	*	7*
20	Ata 2023	*			**	*			*	*	6*
21	Awang 2014	*	*		**	*			*	*	7*
22	Ay 2012	*			**	*			*	*	6*
23	Babu 2017	*	*		**	*			*	*	7*
24	Balci 2021	*	*		**	**			*	*	8*
25	Balli 2015	*			**	*			*	*	6*
26	Baltacıoğlu 2014	*			**	*			*	*	6*
27	Bawankar 2018	*	*		**	*			*	*	7*
28	Bostanci 2013	*			**	*			*	*	6*
29	Bostanci 2017	*	*		**	*			*	*	7*
30	Boström 2015	*	*		**	*			*	*	7*
31	Caribé 2020	*	*		**	*			*	*	7*
32	Caribé 2020	*	*		**	*			*	*	7*
33	Cekici 2023	*	*		**	*			*	*	7*

SUPPLEMENTARY DATA

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars
		1	2	3	4	1	2			
34	Cetinkaya 2013	*	*		**	*		*	*	7*
35	Çetin Özdemir 2022	*	*		**	*		**	*	8*
36	Chang 2020	*	*		**	*		*	*	7*
37	Chaturvedi 2015	*	*		**	*		*	*	7*
38	Cheah 2020	*	*		**			*	*	6*
39	Chen 2010	*			**	*		*	*	6*
40	Cheng 2018	*	*		*	*		*	*	6*
41	Cicmil 2023	*	*		**	*		*	*	7*
42	Cifcibasi 2015	*	*		*	**		*	*	7*
43	D'Aiuto 2010	*	*		**	**		*	*	8*
44	Davies 2011	*	*		**	**		*	*	8*
45	deAlencar 2020	*	*		**	*		*	*	7*
46	Detzen 2017	*	*		**	**		*	*	8*
47	Devanoorkar 2012	*			**	**		*	*	7*
48	Dhulipalla 2023	*	*		*	*		*	*	6*
49	Ding 2022	*	*		**	*		*	*	7*
50	Dopico 2023	*	*		**	**		*	*	8*
51	Duarte 2010	*			**	*		*	*	6*
52	Duzagac 2016	*	*		**	*		*	*	7*
53	Dyab 2024	*	*		**	*		*	*	7*
54	Eldzharov 2021	*	*		**	**		*	*	8*
55	Ersahan 2023	*	*		**	*		*	*	7*
56	Fentoğlu 2011	*	*		**	**		*	*	8*
57	Gao 2021	*	*		**	**		*	*	8*
58	George 2013	*			**	*		*	*	6*
59	Gundala 2014	*	*		*	*		*	*	6*
60	Gunpinar 2020	*	*		**	*		*	*	7*
61	Gupta 2015	*	*		**	**		*	*	8*
62	Gül 2024	*	*		**	**		*	*	8*
63	Gül 2024	*	*		**	*		*	*	7*
64	Gümüş 2014	*	*		**	**		*	*	8*
65	Görgülü 2022	*	*		**	*		*	*	7*
66	Habeeb 2021	*			*	*		*	*	5*
67	Hamad 2022	*			**	*		*	*	6*
68	Hamad 2022	*			**	*		*	*	6*
69	Hameed 2023	*			**	*		*	*	6*
70	Han 2021	*	*		**	*		*	*	7*
71	Han 2023	*	*		**	**		*	*	8*

SUPPLEMENTARY DATA

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars
		1	2	3	4	1	2	1	2	
72	Haririan 2016	*	*		**	*		*	*	7*
73	Hayashi 1999	*			**	*		*	*	6*
74	Haytural 2015	*			**	*		*	*	6*
75	Hendek 2019	*	*		**	**		*	*	8*
76	Hetta 2020	*			**	*		*	*	6*
77	Ikbal 2023	*			**	*		*	*	6*
78	Isola 2021	*	*		**	**		*	*	8*
79	Isola 2021	*	*		**	**		*	*	8*
80	Isola 2022	*	*		**	**		*	*	8*
81	Jain 2020	*			**	*		*	*	6*
82	Jaradat 2013	*	*		**	*		*	*	7*
83	Jentsch 2017	*			**	*		*	*	6*
84	Kabacaoğlu 2024	*	*		**	*		*	*	7*
85	Kaiser 2018	*			*	*		*	*	5*
86	Kalra 2013	*			**	**		*	*	7*
87	Karthikeyan 2007	*			**	*		*	*	6*
88	Keles Yucel 2020	*	*		**	**		*	*	8*
89	Keles Yucel 2023	*	*		**	**		*	*	8*
90	Khalaf 2014	*	*		**	*		*	*	7*
91	Khalid 2017	*	*		**	*		*	*	7*
92	Khan 2020	*			**	*		*	*	6*
93	Kobayashi 2016	*	*		**	*		*	*	7*
94	Korkmaz 2024	*	*		**	*		*	*	7*
95	Kriauciunas 2022	*	*		**	*		*	*	7*
96	Kriauciunas 2024	*	*		**	*		*	*	7*
97	Kumar 2019	*			**	*		*	*	6*
98	Kumari 2014	*	*		**	**		*	*	8*
99	Kurgan 2022	*	*		**	**		*	*	8*
100	Latorre Uriza 2024	*	*		**	*		*	*	7*
101	Leira 2018	*	*		**	*		*	*	7*
102	Leira 2018				**	*		*	*	5*
103	Leira 2019				**	*		*	*	5*
104	Leira 2020	*	*		**	**		*	*	8*
105	Leira 2021	*	*		**	**		*	*	8*
106	Li 2012		*		**			*	*	5*
107	Liao 2011	*	*		**	*		*	*	7*
108	Ligade 2023	*			**	*		*	*	6*

SUPPLEMENTARY DATA

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars
		1	2	3	4	1	2			
109	Lin 2024	*			**	**		*	*	7*
110	Lobão 2019	*			**	**		*	*	7*
111	Lobo 2019	*	*		**	*		*	*	7*
112	Lokhande 2019	*			*	*		*	*	5*
113	Lokhande 2019	*	*			*		*	*	5*
114	Loo 2012	*	*		**	*		*	*	7*
115	Lönn 2014	*			**	*		*	*	6*
116	Mahendra 2022	*	*		**	*		*	*	7*
117	Manosudprasit 2017	*						*	*	3*
118	Martinez-Herrera 2018	*	*		**	**		*	*	8*
119	Martinez-Herrera 2018	*	*		**	*		*	*	7*
120	Masi 2011	*	*		**	**		*	*	8*
121	Matić-Petrović 2016	*	*		**	**		*	*	8*
122	McFarlane 1991	*			**	*		*	*	6*
123	Meraci 2020	*	*		**	*		*	*	7*
124	Miranda 2019	*	*		**	**		*	*	8*
125	Miyazawa 2012	*	*		**			*	*	6*
126	Mohammad 2020	*	*		**	*		*	*	7*
127	Mohan 2021	*	*		**	**		*	*	8*
128	Mohit 2024	*	*		**	*		*	*	7*
129	Mohite 2024	*			**	*		*	*	6*
130	Nair 2016	*			**	*		*	*	6*
131	Nair 2022	*	*		**	**		*	*	8*
132	Napimoga 2014	*			**	**		*	*	7*
133	Nethravathy 2014	*			**	*		*	*	6*
134	Nizam 2014	*	*		**	*		*	*	7*
135	Noack 2017	*	*		**	*		*	*	7*
136	Oner 2024	*	*		**	*		*	*	7*
137	Ortiz-García 2019	*	*		**	**		*	*	8*
138	Ozçaka 2011	*	*		**	**		*	*	8*
139	Ozdemir 2019	*			**	*		*	*	6*
140	Padijal-Molina 2015	*	*		**	**		*	*	8*

SUPPLEMENTARY DATA

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars
		1	2	3	4	1	2			
141	Pai 2021	*	*		**	*		*	*	7*
142	Parihar 2024	*	*		**	*		*		6*
143	Perumal 2014	*	*		**	*		*	*	7*
144	Pradeep 2009	*	*		**	**		*	*	8*
145	Pradeep 2016	*	*		**	**		*	*	8*
146	Preshaw 2020	*	*		**	**		*	*	8*
147	Priyanka 2013	*			**	**		*	*	7*
148	Purwar 2015	*	*		**	*		*	*	7*
149	Purwar 2015	*			**	*		*	*	6*
150	Rabelo 2021	*			**	*		*	*	6*
151	Raghavendra 2012	*	*		**	*		*	*	7*
152	Rahate 2022	*	*		**	*		*	*	7*
153	Raj 2018	**			**			*	*	6*
154	Raunio 2009	*			**			*	*	5*
155	Ravindran 2023	*			*	*		*	*	5*
156	Rigi Ladez 2012	*			*			*	*	4*
157	Rughwani 2022	*	*		**	*		*	*	7*
158	Sai 2020	*			**	*		*	*	6*
159	Sánchez- Hernández 2011	*			**	*		*	*	6*
160	Sasikumar 2022	*			*	*		*	*	5*
161	Satpathy 2015	*	*		**	*		*	*	7*
162	Schenkein 2007	*	*		**	*		*	*	7*
163	Schenkein 2010		*		**	*		*	*	6*
164	Scherbaum 2020	*	*			*		*	*	5*
165	Şengül 2022	*	*		**	*		*	*	7*
166	Sharma 2012	*	*		**	**		*	*	8*
167	Shimada 2010	*			**	*		*	*	6*
168	Silosi 2015	*			**	*		*	*	6*
169	Singh 2024	*	*		**	*		*	*	7*
170	Sllamniku- Dalipi 2013	*	*		**	*		*	*	7*
171	Sophia 2020	*	*		**	*		*	*	7*
172	Suresh 2022	*	*		**	*		*	*	7*
173	Tan 2020	*			**	*		*	*	6*
174	Tayman 2019	*	*		**	*		*	*	7*
175	Temelli 2018				**	*		*	*	5*

SUPPLEMENTARY DATA

Ref.	Author, year	SELECTION				COMPARABILITY		OUTCOME		Total 0-10stars
		1	2	3	4	1	2	1	2	
176	Thilagar 2018	*			**	*		*	*	6*
177	Thorat 2010	*			**	*		*	*	6*
178	Toker 2018	*	*		**	**		*	*	8*
179	Tsuneto 2019	*			**			*	*	5*
180	Turkmen 2023	*	*		**	*		*	*	7*
181	Turkoglu 2017	*			**	**		*	*	7*
182	Türer 2016	*	*		**	**		*	*	8*
183	Türer 2017	*	*		**	**		*	*	8*
184	Türer 2017	*	*		**	**		*	*	8*
185	Wang 2020	*	*		**	**		*	*	8*
186	Wang 2023	*			**	**		*	*	7*
187	Wick 2013	*	*		**	*		**	*	8*
188	Wohlfeil 2012	*	*		**	*		*	*	7*
189	Wänman 2024	*	*		**	*		**	*	8*
190	Xu 2016	*	*		**	**		*	*	8*
191	Xu 2023	*			**	*		*	*	6*
192	Yemenoglu 2024	*	*		**	**		*	*	8*
193	Yetkin 2013				**	*		*	*	5*
194	Yilmaz 2021	*			**	*		*	*	6*
195	Yilmaz 2024	*	*		**	*		*	*	7*
196	Yilmaz 2024	*	*		**	**		*	*	8*
197	Yilmaz 2014	*	*		**	*		*	*	7*
198	Yilmaz 2021	*	*		**	*		**	*	8*
199	Zhang 2017	*			**	*		*	*	6*
200	Zhang 2021	*	*		**	*			*	6*
201	Zhang 2024	*	*			**		*	*	6*
202	Zia 2022				**	*		*	*	5*
203	Zimmermann 2013	*			**	*		*	*	6*
204	Önder 2023	*	*		**	*		*	*	7*
205	Öztürk 2021	*	*		**	*		*	*	7*
206	Öztürk 2015	*			**	*		*	*	6*

SUPPLEMENTARY DATA

Supplementary Table 6. List of included inflammation-related proteins

Protein	Abbreviation	Included in N studies
A Disintegrin And Metalloproteinase with Thrombospondin Motifs 1	ADAMTS-1	1
A Proliferation-Inducing Ligand	APRIL/TNFSF13	1
Adipolin	Adipolin	1
Adiponectin	AdipoQ	6
Alkaline Phosphatase	ALP	4
Amyloid beta peptide 1–40	A β 1-40	1
Amyloid beta peptide 1–42	A β 1-42	1
Apoptosis-associated Speck-like protein containing a caspase activation and recruitment domain	ASC	1
Asprosin	Asprosin	2
B-cell Activating Factor	BAFF	2
Beta-defensin 2	HBD-2	3
Calcitonin gene-related peptide	CGRP	1
Calcium-Binding Myeloid-Related Protein-8/14	MRP-8/14	1
Cartonectin	CTRP3	1
Caspase-1	Casp1	2
Caspase-3	Casp3	2
C-C motif chemokine 11	CCL11	2
Cellular Fibronectin	cFN	1
Chemerin	Chem	2
Chemokine (C-C motif) ligand 2	CCL2/MCP-1	13
Chemokine (C-C motif) ligand 3	CCL3/MIP-1a	6
Chemokine (C-C motif) ligand 4	CCL4/MIP-1 β	2
Chemokine (C-C motif) ligand 5	RANTES	2
Chemokine (C-C motif) ligand 7	CCL7/MCP-3	1
Chemokine (C-C motif) ligand 8	CCL8/MCP-2	1
Chemokine (C-C motif) ligand 13	CCL13/MCP-4	2
Chemokine (C-C motif) ligand 19	CCL19	1
chemokine (C-X3-C motif) ligand 1	CX3CL1/Fractalkine	2
Chitinase-3-like protein 1	YKL40	1
CX3C motif chemokine receptor 1	CX3CR1	1
C-X-C motif chemokine ligand 2	CXCL2/MIP2- α	1
C-X-C motif chemokine ligand 9	CXCL9	1
C-X-C motif chemokine ligand 10	CXCL10	2
C-X-C motif chemokine ligand 11	CXCL11	1

SUPPLEMENTARY DATA

Protein	Abbreviation	Included in N studies
C-X-C motif chemokine ligand 12	CXCL12/SDF-1	1
C-X-C motif chemokine ligand 16	CXCL16	1
Cystatin C	CST3	1
Dickkopf-related protein 1	DKK1	1
Endoglin	ENG	1
Endothelin 1	ET-1	2
Epidermal growth factor	EGF	2
Fetuin-A	AHSG	3
Fibroblast growth factor 2	FGF-2	1
Fms-related tyrosine kinase 3 ligand	FLT3LG	1
Folate receptor 1	FOLR1	1
Galectin-3	GAL3	1
Ghrelin	GHRL	3
Granulocyte colony-stimulating factor	G-CSF	1
Granulocyte-macrophage colony-stimulating factor	GM-CSF	5
Heat shock protein 27	HSP27	1
Heat shock protein 60	HSP60	3
Hepatocyte growth factor	HGF	2
Human cathelicidin LL-37	LL-37	2
Hypoxia-inducible factor 1-alpha	HIF-1 α	1
Insulin-like growth factor 1	IGF-1	1
Interferon alpha	IFN- α	1
Interferon gamma	IFN- γ	10
Interleukin 1 alpha	IL-1 α	2
Interleukin 1 beta	IL-1 β	32
interleukin-1 receptor antagonist	IL-1RA	1
Interleukin 2	IL-2	8
Interleukin-2 receptor	IL-2R	1
Interleukin 4	IL-4	13
Interleukin 5	IL-5	3
Interleukin 6	IL-6	47
Interleukin 7	IL-7	2
Interleukin 8	IL-8	10
Interleukin 10	IL-10	25
Interleukin 12	IL-12	9
Interleukin 13	IL-13	4
Interleukin 15	IL-15	1
Interleukin 17	IL-17	5
Interleukin 17	IL-17A/F	1

SUPPLEMENTARY DATA

Protein	Abbreviation	Included in N studies
Interleukin 17A	IL-17A	8
Interleukin 17B	IL-17B	1
Interleukin 17C	IL-17C	2
Interleukin 17D	IL-17D	1
Interleukin 17E	IL-17E	1
Interleukin 17F	IL-17F	3
Interleukin 18	IL-18	8
Interleukin 20	IL-20	1
Interleukin 21	IL-21	3
Interleukin 23	IL-23	3
Interleukin 27	IL-27	1
Interleukin 33	IL-33	7
Interleukin 34	IL-34	1
Interleukin 35	IL-35	2
Interleukin 36 gamma	IL-36 γ	1
Interleukin 38	IL-38	1
Irisin	Irisin	1
Leptin	LEP	11
Leptin receptor	LEPR	1
L-plastin	LCP1	1
Lymphotoxin alpha	LT- α	1
Macrophage colony-stimulating factor	M-CSF	2
Macrophage derived chemokine	MDC	1
Macrophage migration inhibitory factor	MIF	3
Mannan-binding lectin	MBL	2
Matrix metalloproteinase-1	MMP-1	3
Matrix metalloproteinase-2	MMP-2	3
Matrix metalloproteinase-3	MMP-3	3
Matrix metalloproteinase-7	MMP-7	1
Matrix metalloproteinase-8	MMP-8	8
Matrix metalloproteinase-9	MMP-9	10
Matrix metalloproteinase-12	MMP-12	1
Milk Fat Globule-Epidermal Growth Factor 8	MFG-E8	1
Myeloperoxidase	MPO	4
Netrin 1	NTN1	1
Neuregulin 4	NRG4	1
Neutrophil elastase	ELANE	2
Neutrophil gelatinase-associated lipocalin	NGAL	1
NLR family pyrin domain containing 3	NLRP3	3

SUPPLEMENTARY DATA

Protein	Abbreviation	Included in N studies
N-terminal prohormone of brain natriuretic peptide	NT-proBNP	3
Omentin	Omentin	1
Osteocalcin	OSC	1
Oncostatin M	OSM	3
Osteoprotegerin	OPG	5
Oxidized Low-Density Lipoprotein (Lectin-Like) Receptor 1	OLR-1	1
Pentraxin-related protein PTX3	PTX3	1
Periostin	POSTN	2
Platelet endothelial cell adhesion molecule	PECAM-1	1
Platelet-activating factor	PAF	1
Procalcitonin	PCT	5
Progranulin	Pgranulin	1
P-selectin	SELP	1
Receptor activator of nuclear factor kappa-B ligand	RANKL	6
Receptor tyrosine-protein kinase erbB-4	ErbB4	1
Resistin	RETN	5
Sclerostin	SOST	1
sE Selectin	Selectin	1
Sirtuin 1	SIRT1	3
Sirtuin 6	SIRT6	1
Soluble Cluster of differentiation 14	sCD14	2
Soluble Cluster of differentiation 40	sCD40	1
Soluble Cluster of differentiation 40 ligand	sCD40L	1
Soluble Cluster of differentiation 163	sCD163	2
Soluble Fas	sFas	1
Soluble Fas ligand	sFasL	2
Soluble Intercellular Adhesion Molecule 1	sICAM-1	2
Soluble Triggering receptor expressed on myeloid cells 1	sTREM-1	2
Soluble urokinase plasminogen activator receptor	suPAR	2
Soluble Vascular cell adhesion protein 1	sVCAM-1	2
Stem cell factor	SCF	1
Thymic stromal lymphopoietin	TSLP	1
TIMP metalloproteinase inhibitor 1	TIMP-1	4
Transforming growth factor alpha	TGF- α	1
Transforming growth factor beta	TGF- β	5
Trefoil factor family 1	TFF-1	1
Trefoil factor family 3	TFF-3	1

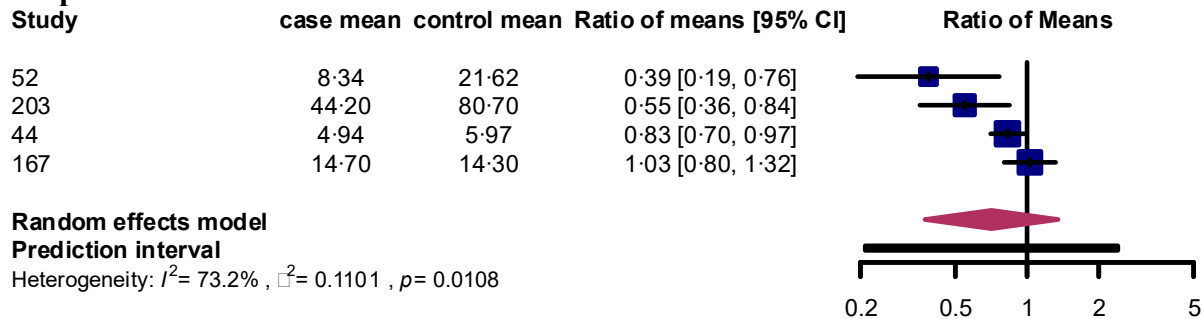
SUPPLEMENTARY DATA

Protein	Abbreviation	Included in N studies
Troponin 1	Tp1	1
Tumor Necrosis Factor (Ligand) superfamily 10	TNFSF-10	1
Tumor necrosis factor ligand superfamily member 12	TNFSF-12	2
Tumor necrosis factor receptor 2	TNFR2	1
Tumor necrosis factor alpha	TNF- α	41
Uncoordinated (UNC) 5 family members B	Unc5b	1
Vascular endothelial growth factor	VEGF	5
Visfatin	VF	3

Supplementary Figure 1. Forest plots of proteins in A) main meta-analysis B) subgroup analysis consisting of only systemically healthy C) subgroup analysis consisting of only non-smokers

A. Main meta-analysis

Adiponectin



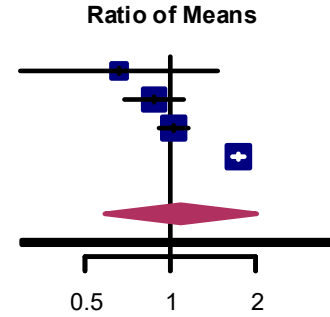
ALP

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
202	16.32	24.75	0.66 [0.30, 1.47]
139	0.64	0.73	0.88 [0.69, 1.12]
197	60.80	59.14	1.03 [0.91, 1.16]
142	102.38	58.88	1.74 [1.66, 1.82]

**Random effects model
Prediction interval**

Heterogeneity: $I^2=96.8\%$, $\tau^2=0.1265$, $p<0.0001$

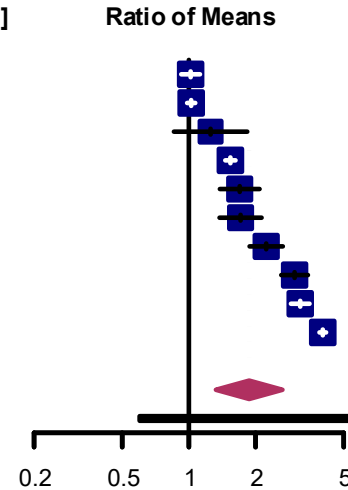


CCL-2

Study	case mean	control mean	Ratio of means [95% CI]
74	8.64	8.48	1.02 [0.92, 1.12]
189	560.61	547.37	1.02 [0.98, 1.07]
194	28.47	22.72	1.25 [0.86, 1.83]
41	673.17	437.17	1.54 [1.46, 1.62]
67	82.43	48.59	1.70 [1.38, 2.08]
199	157.45	92.00	1.71 [1.38, 2.13]
61	101.17	45.28	2.23 [1.88, 2.66]
144	465.80	155.20	3.00 [2.61, 3.45]
15	489.27	153.75	3.18 [2.89, 3.50]
23	0.53	0.13	4.02 [3.89, 4.16]

**Random effects model
Prediction interval**

Heterogeneity: $I^2=99.7\%$, $\tau^2=0.2296$, $p=0$

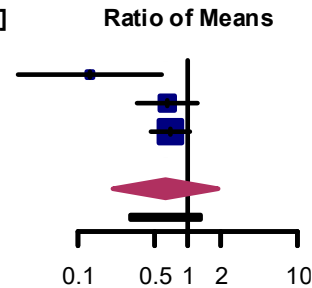


CCL-3

Study	case mean	control mean	Ratio of means [95% CI]
124	11.03	85.90	0.13 [0.03, 0.58]
74	11.98	18.38	0.65 [0.35, 1.23]
136	218.56	314.20	0.70 [0.46, 1.05]

**Random effects model
Prediction interval**

Heterogeneity: $I^2=55.7\%$, $\tau^2<0.0001$, $p=0.1047$

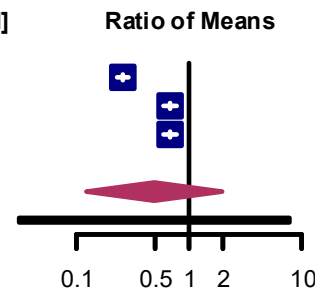


Fetuin A

Study	case mean	control mean	Ratio of means [95% CI]
131	566.16	2192.66	0.26 [0.23, 0.29]
183	347.83	512.18	0.68 [0.59, 0.78]
184	347830.00	512180.00	0.68 [0.59, 0.78]

**Random effects model
Prediction interval**

Heterogeneity: $I^2=98.7\%$, $\tau^2=0.3082$, $p<0.0001$



Ghrelin

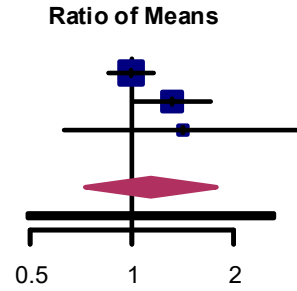
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
152	544.65	547.56	0.99 [0.85, 1.16]
197	514.61	391.29	1.32 [1.01, 1.71]
83	453.48	320.32	1.42 [0.63, 3.18]

Random effects model

Prediction interval

Heterogeneity: $I^2= 45.7%$, $\tau^2= 0.0225$, $p= 0.1585$



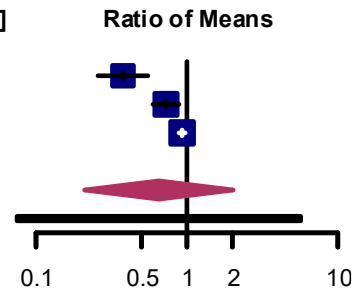
HBD-2

Study	case mean	control mean	Ratio of means [95% CI]
205	2.92	7.75	0.38 [0.26, 0.55]
169	591.50	813.78	0.73 [0.60, 0.89]
82	99.11	106.66	0.93 [0.89, 0.97]

Random effects model

Prediction interval

Heterogeneity: $I^2= 92.4%$, $\tau^2= 0.1859$, $p< 0.0001$



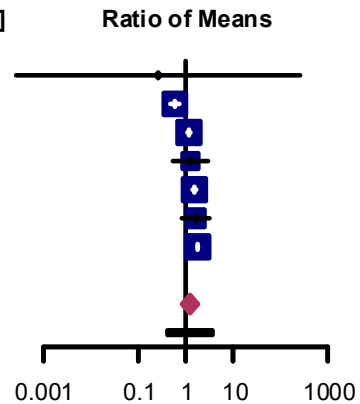
IFN-γ

Study	case mean	control mean	Ratio of means [95% CI]
150	0.46	1.74	0.26 [0.00, 260.79]
124	4.32	7.30	0.59 [0.48, 0.74]
41	577.14	491.43	1.17 [1.09, 1.26]
44	0.63	0.50	1.26 [0.54, 2.97]
189	0.31	0.20	1.53 [1.40, 1.68]
45	38.79	23.86	1.63 [0.83, 3.19]
114	94.71	52.77	1.79 [1.77, 1.82]

Random effects model

Prediction interval

Heterogeneity: $I^2= 97.4%$, $\tau^2= 0.1663$, $p< 0.0001$



IL-1β

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
124	0.79	1.20	0.66 [0.49, 0.90]	
189	0.15	0.20	0.77 [0.70, 0.84]	
24	16.72	19.33	0.86 [0.66, 1.14]	
11	21.34	23.60	0.90 [0.85, 0.96]	
36	3.96	4.37	0.91 [0.64, 1.28]	
34	8.01	8.71	0.92 [0.85, 1.00]	
56	4.69	4.74	0.99 [0.52, 1.90]	
41	24.04	22.41	1.07 [1.06, 1.09]	
201	110.35	90.55	1.22 [1.18, 1.26]	
150	0.16	0.12	1.30 [0.73, 2.31]	
192	651.13	485.43	1.34 [1.19, 1.51]	
186	62.91	39.84	1.58 [1.30, 1.92]	
161	4.14	2.61	1.59 [1.36, 1.85]	
126	4.99	3.12	1.60 [1.52, 1.68]	
84	245.06	152.19	1.61 [1.48, 1.75]	
80	0.29	0.17	1.71 [0.79, 3.67]	
200	178.91	102.23	1.75 [1.56, 1.96]	
27	21.95	11.44	1.92 [1.47, 2.51]	
197	163.13	77.49	2.11 [1.23, 3.60]	
89	3440.09	1316.41	2.61 [1.82, 3.75]	
170	7.00	2.10	3.33 [2.00, 5.56]	
114	78.07	19.57	3.99 [3.89, 4.09]	
54	19.70	3.60	5.47 [4.95, 6.05]	
76	84.02	7.03	11.95 [9.56, 14.94]	

Random effects model

Prediction interval

Heterogeneity: $I^2=99.8\%$, $\tau^2=0.4493$, $p=0$

IL-2

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
124	0.85	1.20	0.70 [0.52, 0.96]	
90	7.77	7.32	1.06 [0.85, 1.33]	
106	66.40	33.15	2.00 [1.95, 2.05]	
150	4.02	0.40	10.04 [3.81, 26.48]	
122	11740.00	120.00	97.83 [63.92, 149.75]	

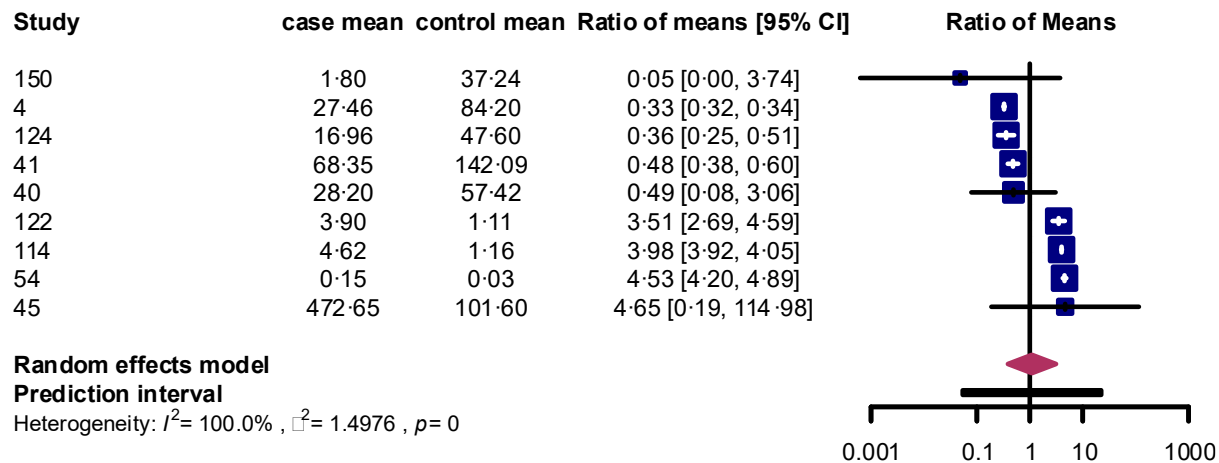
Random effects model

Prediction interval

Heterogeneity: $I^2=99.0\%$, $\tau^2=4.0478$, $p<0.0001$

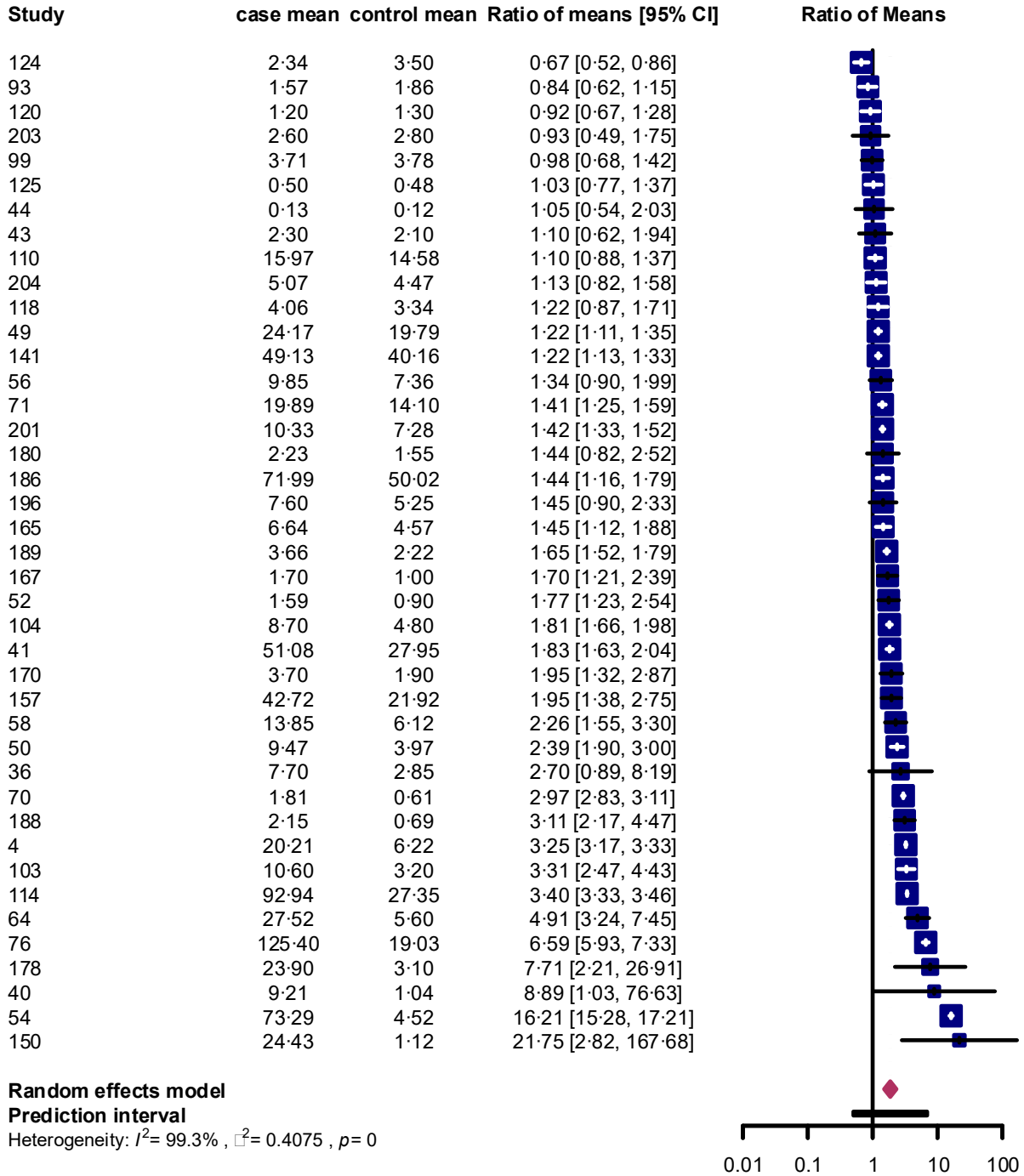
IL-4

SUPPLEMENTARY DATA



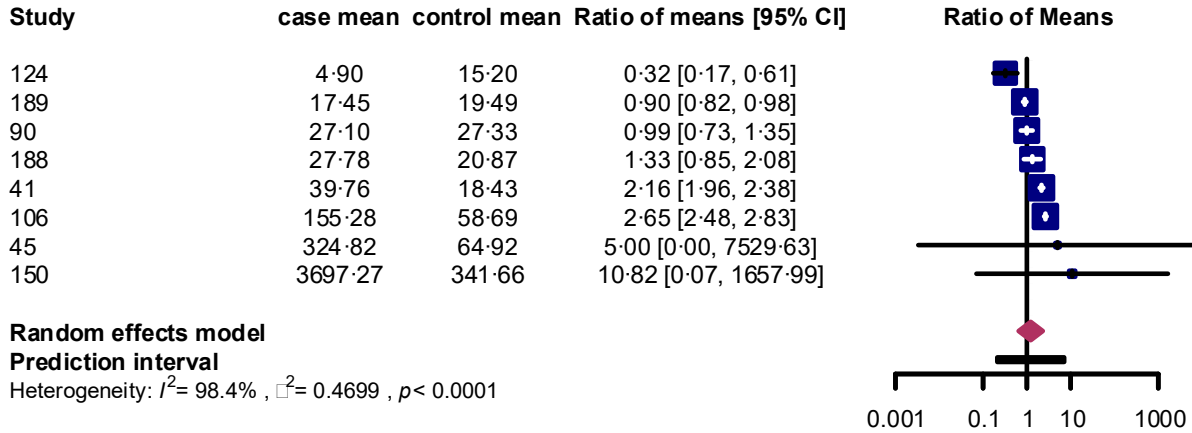
IL-6

SUPPLEMENTARY DATA

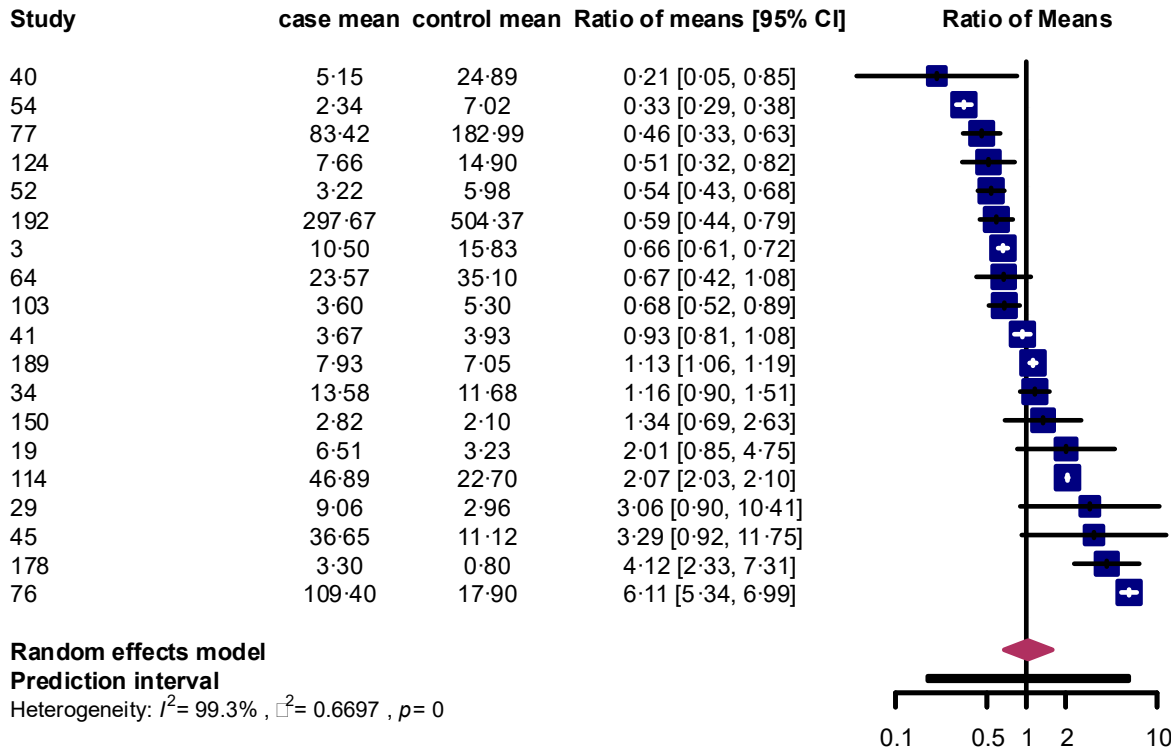


IL-8

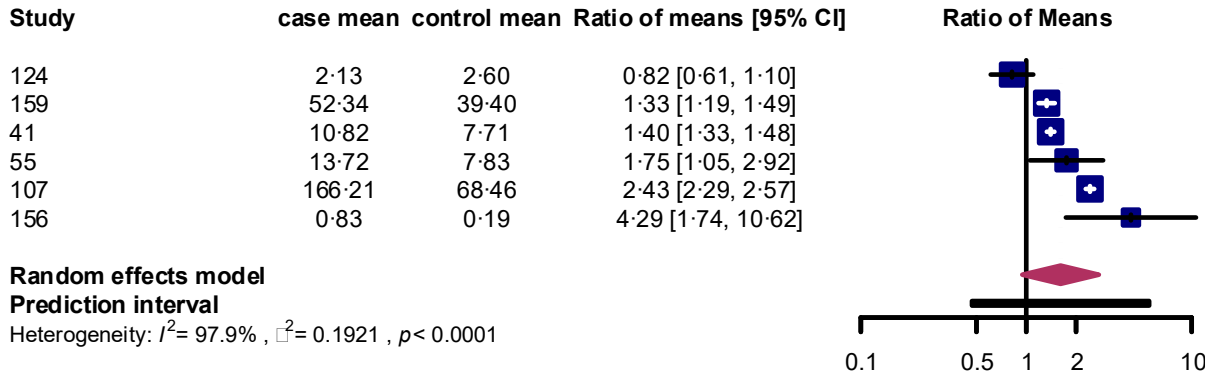
SUPPLEMENTARY DATA



IL-10



IL-12



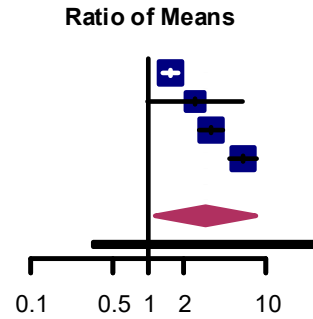
IL-17

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
191	0.17	0.11	1.55 [1.33, 1.80]
51	17.72	7.09	2.50 [0.99, 6.34]
94	47.70	13.95	3.42 [2.71, 4.31]
163	12.16	1.90	6.40 [4.91, 8.35]

Random effects model
Prediction interval

Heterogeneity: $I^2=96.8\%$, $\tau^2=0.3722$, $p<0.0001$

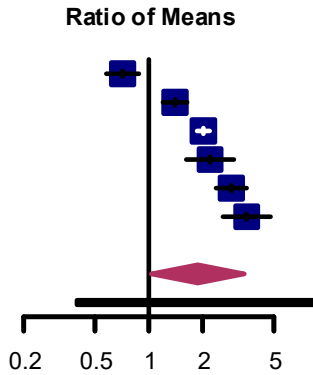


IL-17A

Study	case mean	control mean	Ratio of means [95% CI]
124	7.28	10.20	0.71 [0.58, 0.88]
189	0.68	0.48	1.40 [1.20, 1.64]
41	116.79	57.86	2.02 [1.86, 2.19]
42	37.56	17.07	2.20 [1.62, 2.99]
160	3.50	1.21	2.89 [2.38, 3.52]
21	77.13	21.87	3.53 [2.60, 4.79]

Random effects model
Prediction interval

Heterogeneity: $I^2=96.3\%$, $\tau^2=0.3117$, $p<0.0001$

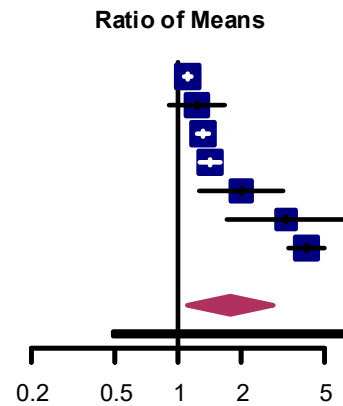


IL-18

Study	case mean	control mean	Ratio of means [95% CI]
189	312.49	280.74	1.11 [1.07, 1.16]
44	194.63	158.10	1.23 [0.91, 1.67]
41	194.28	147.59	1.32 [1.23, 1.40]
159	395.78	278.20	1.42 [1.27, 1.59]
179	164.80	82.30	2.00 [1.26, 3.17]
84	349.85	106.74	3.28 [1.71, 6.28]
130	47.09	11.49	4.10 [3.36, 4.99]

Random effects model
Prediction interval

Heterogeneity: $I^2=96.9\%$, $\tau^2=0.2385$, $p<0.0001$

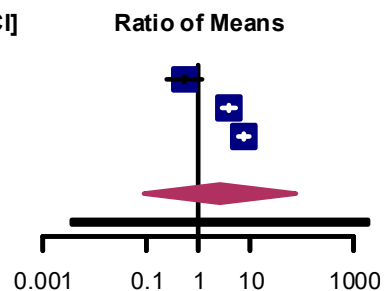


IL-21

Study	case mean	control mean	Ratio of means [95% CI]
124	0.65	1.20	0.54 [0.25, 1.19]
113	70.38	17.94	3.92 [2.90, 5.31]
112	497.78	65.34	7.62 [5.96, 9.74]

Random effects model
Prediction interval

Heterogeneity: $I^2=95.5\%$, $\tau^2=1.7400$, $p<0.0001$



IL-23

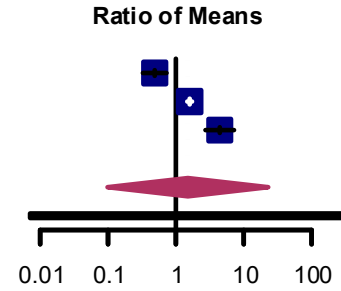
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
124	193.04	396.00	0.49 [0.33, 0.73]
41	47.77	29.93	1.60 [1.47, 1.73]
42	258.63	58.35	4.43 [2.73, 7.19]

Random effects model

Prediction interval

Heterogeneity: $I^2=96.1\%$, $\tau^2=1.1533$, $p<0.0001$



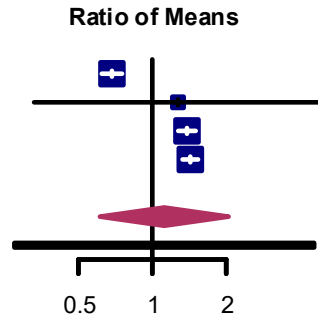
IL-33

Study	case mean	control mean	Ratio of means [95% CI]
109	66.50	97.10	0.68 [0.62, 0.75]
156	0.34	0.27	1.27 [0.33, 4.91]
1	56.32	40.68	1.38 [1.28, 1.50]
41	64.75	45.32	1.43 [1.33, 1.54]

Random effects model

Prediction interval

Heterogeneity: $I^2=98.2\%$, $\tau^2=0.1486$, $p<0.0001$



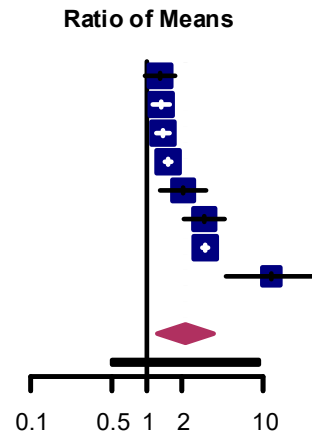
Leptin

Study	case mean	control mean	Ratio of means [95% CI]
44	21.53	16.58	1.30 [0.96, 1.75]
148	10749.00	8085.00	1.33 [1.12, 1.57]
87	12082.00	8783.00	1.38 [1.21, 1.57]
149	11600.00	7616.62	1.52 [1.43, 1.62]
167	8.00	3.90	2.05 [1.30, 3.24]
59	6010.00	1926.67	3.12 [2.08, 4.67]
8	7.82	2.46	3.18 [3.00, 3.36]
203	294.70	25.00	11.79 [4.80, 28.97]

Random effects model

Prediction interval

Heterogeneity: $I^2=98.2\%$, $\tau^2=0.3322$, $p<0.0001$



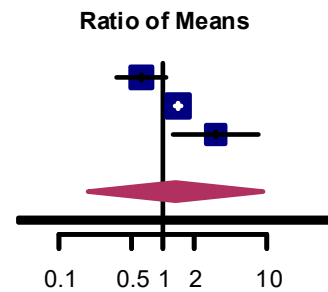
MIF

Study	case mean	control mean	Ratio of means [95% CI]
194	1383.89	2230.37	0.62 [0.36, 1.07]
137	9.91	7.08	1.40 [1.31, 1.50]
136	7797.50	2419.00	3.22 [1.25, 8.30]

Random effects model

Prediction interval

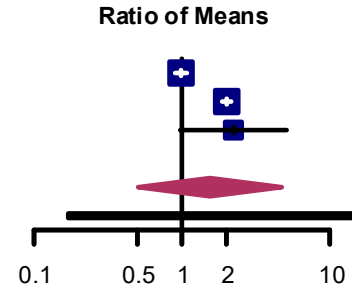
Heterogeneity: $I^2=82.4\%$, $\tau^2=0.4689$, $p=0.0034$



MMP-1

SUPPLEMENTARY DATA

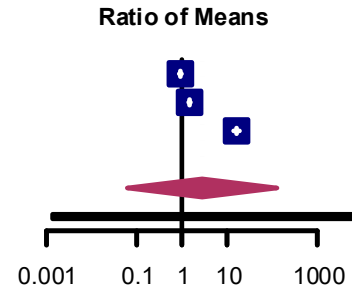
Study	case mean	control mean	Ratio of means [95% CI]
189	3433.25	3479.73	0.99 [0.90, 1.08]
106	62630.00	31160.00	2.01 [1.87, 2.16]
19	5909.47	2648.07	2.23 [0.97, 5.11]



Random effects model
Prediction interval
 Heterogeneity: $I^2=98.6\%$, $\tau^2=0.1878$, $p<0.0001$

MMP-2

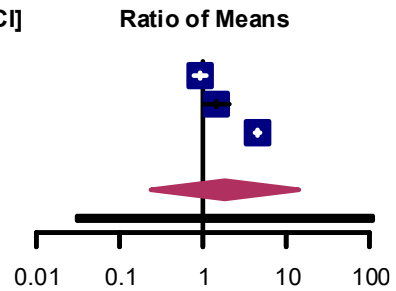
Study	case mean	control mean	Ratio of means [95% CI]
187	189.11	204.06	0.93 [0.87, 0.98]
201	41.44	27.99	1.48 [1.41, 1.55]
107	1463.60	89.84	16.29 [14.03, 18.92]



Random effects model
Prediction interval
 Heterogeneity: $I^2=99.8\%$, $\tau^2=2.3591$, $p<0.0001$

MMP-3

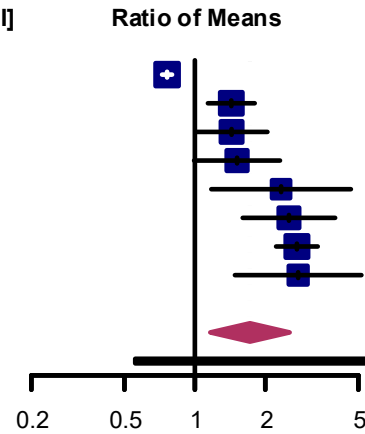
Study	case mean	control mean	Ratio of means [95% CI]
187	15.03	16.22	0.93 [0.78, 1.10]
19	16091.00	11065.14	1.45 [1.02, 2.08]
106	73850.00	16300.00	4.53 [4.22, 4.86]



Random effects model
Prediction interval
 Heterogeneity: $I^2=99.3\%$, $\tau^2=0.6730$, $p<0.0001$

MMP-8

Study	case mean	control mean	Ratio of means [95% CI]
138	17.71	23.28	0.76 [0.72, 0.80]
187	12.93	9.03	1.43 [1.14, 1.80]
134	47.79	33.30	1.44 [1.01, 2.04]
135	138.39	91.37	1.51 [0.99, 2.31]
195	37.49	16.05	2.34 [1.18, 4.64]
88	116.05	45.98	2.52 [1.60, 3.98]
192	4150.00	1520.00	2.73 [2.22, 3.35]
65	53.42	19.33	2.76 [1.48, 5.15]



Random effects model
Prediction interval
 Heterogeneity: $I^2=96.9\%$, $\tau^2=0.1982$, $p<0.0001$

MMP-9

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
195	173.36	286.43	0.61 [0.42, 0.87]	
138	272.16	276.76	0.98 [0.91, 1.07]	
19	48042.90	48820.75	0.98 [0.74, 1.31]	
78	52.93	51.13	1.04 [0.99, 1.08]	
168	54.81	34.12	1.61 [1.17, 2.20]	
187	491.11	303.04	1.62 [1.38, 1.90]	
201	540.16	330.70	1.63 [1.60, 1.66]	
106	11650.00	2170.00	5.37 [4.95, 5.83]	
94	320.00	0.24	1333.33 [1062.84, 1672.66]	

Random effects model

Prediction interval

Heterogeneity: $I^2=99.8\%$, $\tau^2=5.5874$, $p=0$

MPO

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
195	263.37	234.32	1.12 [0.76, 1.67]	
138	66.08	49.43	1.34 [1.09, 1.64]	
134	124.67	82.90	1.50 [1.19, 1.91]	
42	3209.79	1870.63	1.72 [1.48, 1.99]	

Random effects model

Prediction interval

Heterogeneity: $I^2=52.3\%$, $\tau^2=0.0131$, $p=0.0984$

OPG

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
26	0.20	0.28	0.72 [0.61, 0.85]	
190	232.60	244.96	0.95 [0.81, 1.11]	
192	2.13	1.96	1.09 [0.97, 1.22]	
13	58.00	45.30	1.28 [1.06, 1.55]	
18	719.93	260.12	2.77 [1.29, 5.96]	

Random effects model

Prediction interval

Heterogeneity: $I^2=87.1\%$, $\tau^2=0.1006$, $p<0.0001$

Procalcitonin

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
102	34.00	29.00	1.17 [0.89, 1.55]	
69	266.92	194.04	1.38 [1.17, 1.62]	
35	0.06	0.04	1.58 [0.99, 2.52]	
127	1.85	0.05	37.00 [30.77, 44.50]	
20	0.00	0.00	NaN [NaN, NA]	

Random effects model

Prediction interval

Heterogeneity: $I^2=99.6\%$, $\tau^2=2.7339$, $p<0.0001$

RANKL

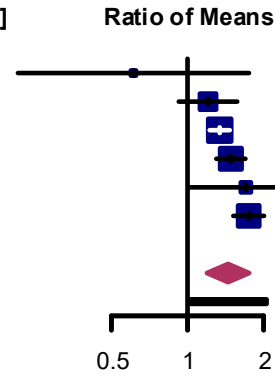
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
18	27.46	44.92	0.61 [0.21, 1.75]
197	233.17	193.49	1.21 [0.92, 1.57]
192	58.90	43.93	1.34 [1.22, 1.47]
26	18.89	12.73	1.48 [1.30, 1.69]
13	31.80	18.70	1.70 [1.02, 2.85]
190	284.52	163.01	1.75 [1.52, 2.01]

Random effects model

Prediction interval

Heterogeneity: $I^2=65.5%$, $\tau^2=0.0139$, $p=0.0128$



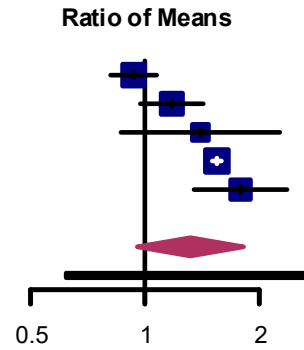
Resistin

Study	case mean	control mean	Ratio of means [95% CI]
171	35.87	38.40	0.93 [0.81, 1.07]
44	7.83	6.65	1.18 [0.97, 1.42]
47	1.89	1.35	1.40 [0.87, 2.27]
172	19.07	12.32	1.55 [1.51, 1.59]
203	2.50	1.40	1.79 [1.35, 2.37]

Random effects model

Prediction interval

Heterogeneity: $I^2=92.9%$, $\tau^2=0.0589$, $p<0.0001$



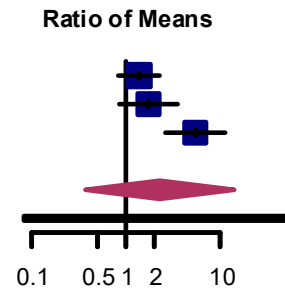
SIRT1

Study	case mean	control mean	Ratio of means [95% CI]
32	1.06	0.77	1.38 [0.83, 2.28]
31	0.80	0.46	1.74 [0.85, 3.54]
95	6.06	1.11	5.46 [2.63, 11.33]

Random effects model

Prediction interval

Heterogeneity: $I^2=79.0%$, $\tau^2=0.4194$, $p=0.0086$



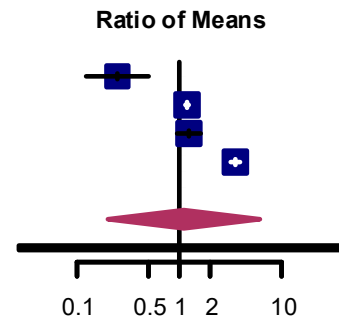
TGF-β

Study	case mean	control mean	Ratio of means [95% CI]
124	2.80	11.30	0.25 [0.12, 0.50]
41	28.78	24.17	1.19 [1.15, 1.24]
90	18026.30	14516.66	1.24 [0.95, 1.62]
76	99.89	28.26	3.53 [3.18, 3.92]

Random effects model

Prediction interval

Heterogeneity: $I^2=99.2%$, $\tau^2=1.0831$, $p<0.0001$

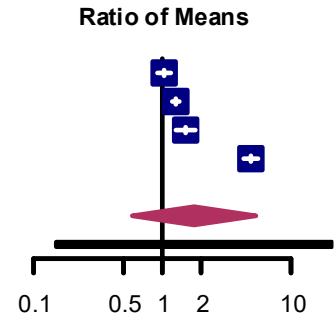


TIMP-1

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
134	136.13	131.65	1.03 [0.92, 1.17]
138	104.92	82.38	1.27 [1.20, 1.36]
195	143.19	94.31	1.52 [1.28, 1.81]
107	110120.00	22570.00	4.88 [4.29, 5.55]

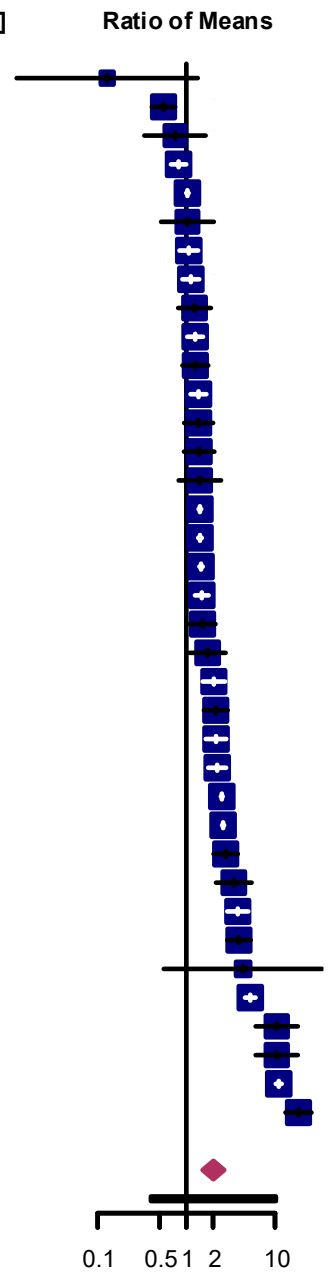
Random effects model
Prediction interval
 Heterogeneity: $I^2=99.2\%$, $\tau^2=0.4792$, $p<0.0001$



TNF- α

Study	case mean	control mean	Ratio of means [95% CI]
56	31.92	249.22	0.13 [0.01, 1.35]
125	1.09	1.97	0.55 [0.41, 0.75]
44	0.55	0.74	0.75 [0.34, 1.65]
124	4.09	5.00	0.82 [0.67, 1.00]
189	16.86	16.38	1.03 [1.00, 1.06]
36	13.22	12.84	1.03 [0.52, 2.04]
117	7.41	6.95	1.07 [0.84, 1.36]
167	1.80	1.60	1.12 [0.90, 1.40]
170	80.00	64.60	1.24 [0.81, 1.89]
118	9.71	7.72	1.26 [1.02, 1.54]
40	2.62	2.07	1.26 [0.90, 1.77]
116	72.75	53.06	1.37 [1.12, 1.68]
52	4.53	3.29	1.38 [0.95, 2.00]
197	1.55	1.11	1.40 [0.94, 2.07]
51	1.74	1.22	1.42 [0.82, 2.46]
201	42.35	29.77	1.42 [1.38, 1.47]
41	24.61	17.25	1.43 [1.36, 1.50]
126	10.54	7.19	1.47 [1.40, 1.53]
186	72.30	48.35	1.50 [1.25, 1.78]
203	3.20	2.10	1.52 [1.09, 2.13]
175	0.59	0.34	1.74 [1.09, 2.77]
119	14.76	7.22	2.04 [1.53, 2.73]
192	241.23	112.33	2.15 [1.58, 2.92]
176	11.90	5.50	2.16 [1.66, 2.82]
55	34.01	15.25	2.23 [1.77, 2.81]
114	67.61	26.90	2.51 [2.46, 2.57]
4	16.84	6.48	2.60 [2.53, 2.67]
132	21.33	7.67	2.78 [2.03, 3.81]
81	2.98	0.87	3.43 [2.16, 5.45]
64	14.46	3.80	3.80 [2.90, 5.00]
113	70.38	17.94	3.92 [2.90, 5.31]
150	7.91	1.81	4.37 [0.56, 34.24]
48	1078.09	204.75	5.27 [4.59, 6.04]
183	19.89	1.90	10.47 [6.06, 18.10]
184	19.89	1.90	10.47 [6.06, 18.10]
54	13.68	1.24	11.03 [10.21, 11.92]
76	202.71	11.01	18.41 [13.14, 25.81]

Random effects model
Prediction interval
 Heterogeneity: $I^2=99.4\%$, $\tau^2=0.6221$, $p=0$



SUPPLEMENTARY DATA

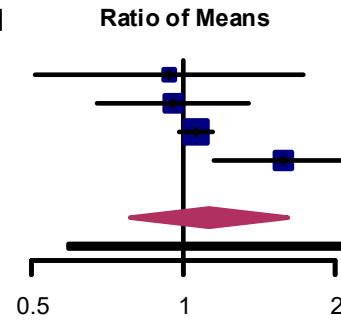
VEGF

Study	case mean	control mean	Ratio of means [95% CI]
174	7380.73	7870.00	0.94 [0.51, 1.73]
96	554.29	581.32	0.95 [0.67, 1.35]
189	666.67	629.19	1.06 [0.98, 1.14]
198	2.61	1.65	1.58 [1.15, 2.17]

Random effects model

Prediction interval

Heterogeneity: $I^2= 53.4%$, $\tau^2= 0.0278$, $p= 0.0923$



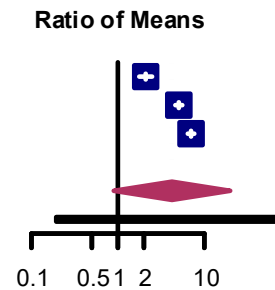
Visfatin

Study	case mean	control mean	Ratio of means [95% CI]
191	33870.00	16150.00	2.10 [1.77, 2.49]
182	56.31	11.11	5.07 [4.62, 5.56]
151	58.97	8.40	7.02 [6.44, 7.65]

Random effects model

Prediction interval

Heterogeneity: $I^2= 98.7%$, $\tau^2= 0.3839$, $p< 0.0001$



B) Subgroup analysis consisting of only systemically healthy

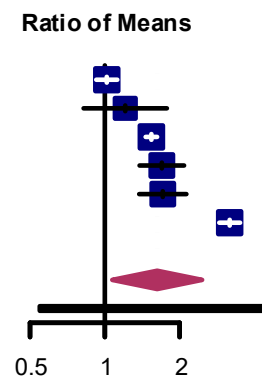
CCL-2

Study	case mean	control mean	Ratio of means [95% CI]
74	8.64	8.48	1.02 [0.92, 1.12]
194	27.60	22.84	1.21 [0.82, 1.78]
41	673.17	437.17	1.54 [1.46, 1.62]
67	82.43	48.59	1.70 [1.38, 2.08]
199	157.45	92.00	1.71 [1.38, 2.13]
15	489.27	153.75	3.18 [2.89, 3.50]

Random effects model

Prediction interval

Heterogeneity: $I^2= 98.2%$, $\tau^2= 0.1522$, $p< 0.0001$



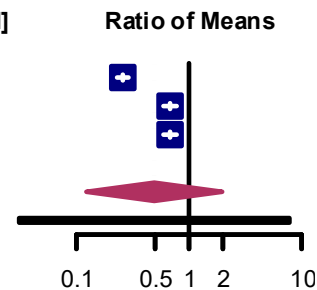
Fetuin-A

Study	case mean	control mean	Ratio of means [95% CI]
131	566.16	2192.66	0.26 [0.23, 0.29]
183	347.83	512.18	0.68 [0.59, 0.78]
184	347830.00	512180.00	0.68 [0.59, 0.78]

Random effects model

Prediction interval

Heterogeneity: $I^2= 98.7%$, $\tau^2= 0.3082$, $p< 0.0001$



Ghrelin

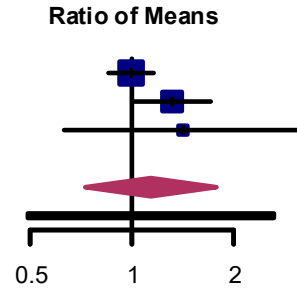
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
152	544.65	547.56	0.99 [0.85, 1.16]
197	514.61	391.29	1.32 [1.01, 1.71]
83	453.48	320.32	1.42 [0.63, 3.18]

Random effects model

Prediction interval

Heterogeneity: $I^2= 45.7%$, $\tau^2= 0.0225$, $p= 0.1585$



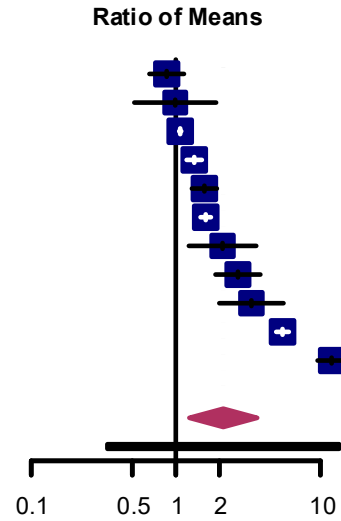
IL-1β

Study	case mean	control mean	Ratio of means [95% CI]
24	16.72	19.33	0.86 [0.66, 1.14]
56	4.69	4.74	0.99 [0.52, 1.90]
41	24.04	22.41	1.07 [1.06, 1.09]
192	651.13	485.43	1.34 [1.19, 1.51]
186	62.91	39.91	1.58 [1.29, 1.92]
84	245.06	152.19	1.61 [1.48, 1.75]
197	163.13	77.49	2.11 [1.23, 3.60]
89	3440.09	1279.10	2.69 [1.88, 3.85]
170	7.00	2.10	3.33 [2.00, 5.56]
54	19.70	3.60	5.47 [4.95, 6.05]
76	84.02	7.03	11.95 [9.56, 14.94]

Random effects model

Prediction interval

Heterogeneity: $I^2= 99.4%$, $\tau^2= 0.6262$, $p= 0$



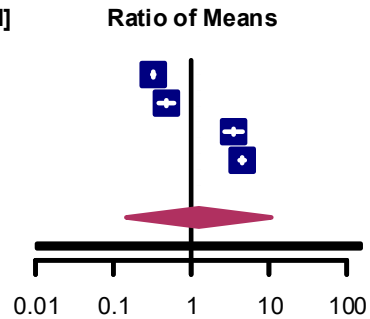
IL-4

Study	case mean	control mean	Ratio of means [95% CI]
4	27.46	84.20	0.33 [0.32, 0.34]
41	68.35	142.09	0.48 [0.38, 0.60]
122	3.90	1.11	3.51 [2.69, 4.59]
54	0.15	0.03	4.53 [4.20, 4.89]

Random effects model

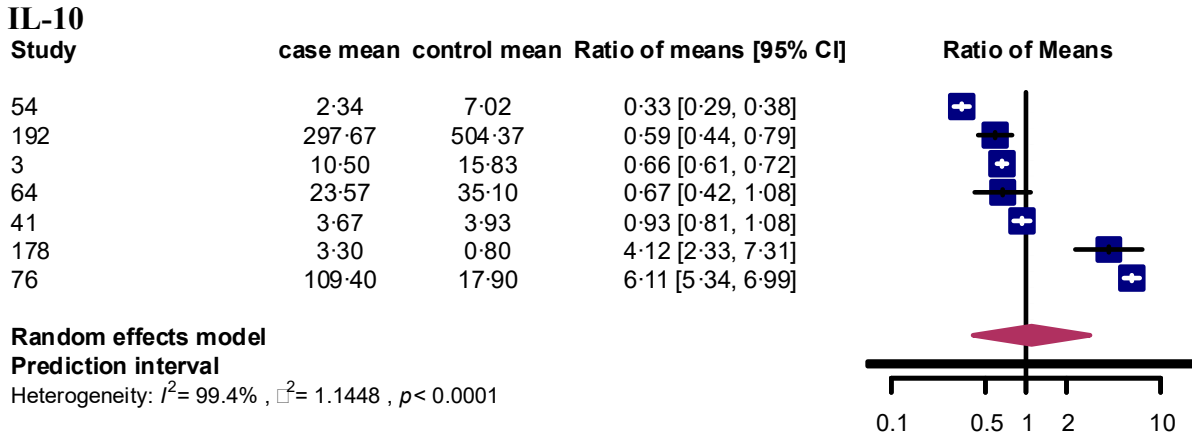
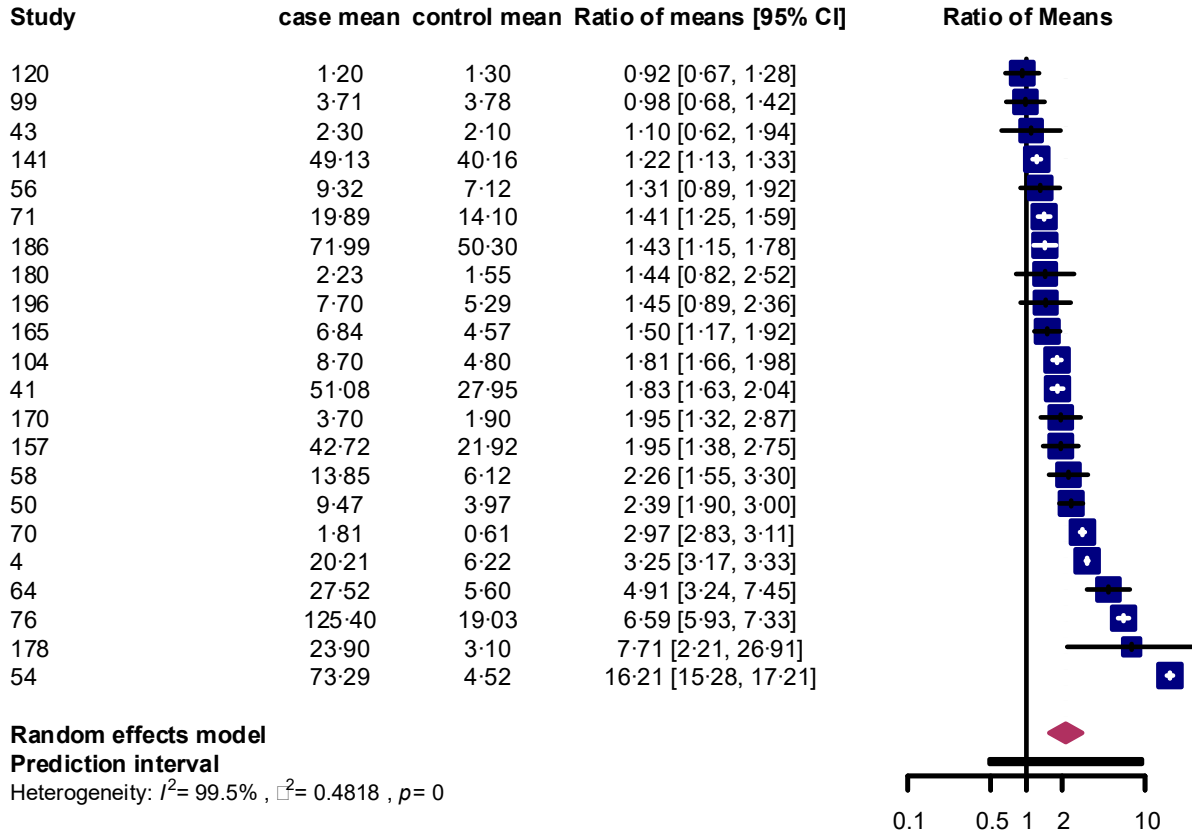
Prediction interval

Heterogeneity: $I^2= 99.9%$, $\tau^2= 1.8099$, $p= 0$



IL-6

SUPPLEMENTARY DATA



IL-12

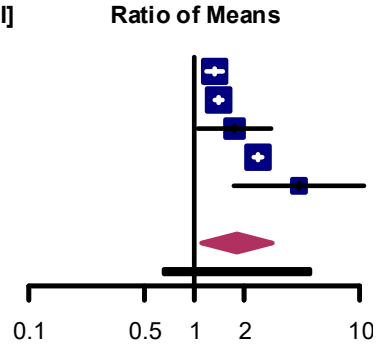
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
159	52.34	39.40	1.33 [1.19, 1.49]
41	10.82	7.71	1.40 [1.33, 1.48]
55	13.72	7.83	1.75 [1.05, 2.92]
107	166.21	68.46	2.43 [2.29, 2.57]
156	0.83	0.19	4.29 [1.74, 10.62]

Random effects model

Prediction interval

Heterogeneity: $I^2=98.1\%$, $\tau^2=0.1064$, $p<0.0001$



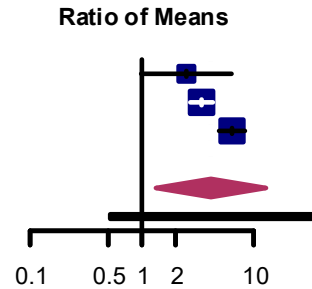
IL-17

Study	case mean	control mean	Ratio of means [95% CI]
51	17.72	7.09	2.50 [0.99, 6.34]
94	47.70	13.95	3.42 [2.71, 4.31]
163	12.16	1.90	6.40 [4.91, 8.35]

Random effects model

Prediction interval

Heterogeneity: $I^2=85.3\%$, $\tau^2=0.1607$, $p=0.0011$



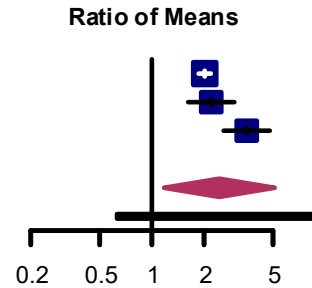
IL-17A

Study	case mean	control mean	Ratio of means [95% CI]
41	116.79	57.86	2.02 [1.86, 2.19]
42	37.56	17.07	2.20 [1.62, 2.99]
21	77.13	21.87	3.53 [2.60, 4.79]

Random effects model

Prediction interval

Heterogeneity: $I^2=83.4\%$, $\tau^2=0.0711$, $p=0.0025$



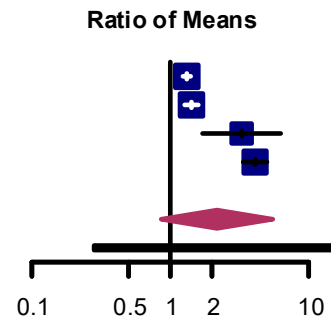
IL-18

Study	case mean	control mean	Ratio of means [95% CI]
41	194.28	147.59	1.32 [1.23, 1.40]
159	395.78	278.20	1.42 [1.27, 1.59]
84	349.85	106.74	3.28 [1.71, 6.28]
130	47.09	11.49	4.10 [3.36, 4.99]

Random effects model

Prediction interval

Heterogeneity: $I^2=97.5\%$, $\tau^2=0.3248$, $p<0.0001$



IL-33

SUPPLEMENTARY DATA

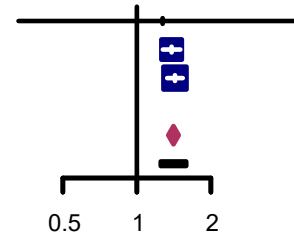
Study	case mean	control mean	Ratio of means [95% CI]
156	0.34	0.27	1.27 [0.33, 4.91]
1	56.32	40.68	1.38 [1.28, 1.50]
41	64.75	45.32	1.43 [1.33, 1.54]

Random effects model

Prediction interval

Heterogeneity: $I^2=0.0\%$, $\tau^2=0$, $p=0.8435$

Ratio of Means



MIF

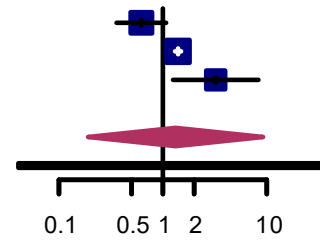
Study	case mean	control mean	Ratio of means [95% CI]
194	1383.89	2230.37	0.62 [0.36, 1.07]
137	9.91	7.08	1.40 [1.31, 1.50]
136	7797.50	2419.00	3.22 [1.25, 8.30]

Random effects model

Prediction interval

Heterogeneity: $I^2=82.4\%$, $\tau^2=0.4689$, $p=0.0034$

Ratio of Means



MMP-8

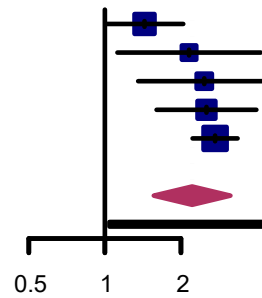
Study	case mean	control mean	Ratio of means [95% CI]
134	47.79	33.30	1.44 [1.01, 2.04]
195	35.29	16.39	2.15 [1.12, 4.14]
65	49.79	20.13	2.47 [1.35, 4.52]
88	116.05	45.98	2.52 [1.60, 3.98]
192	4150.00	1520.00	2.73 [2.22, 3.35]

Random effects model

Prediction interval

Heterogeneity: $I^2=59.0\%$, $\tau^2=0.0533$, $p=0.0447$

Ratio of Means



MPO

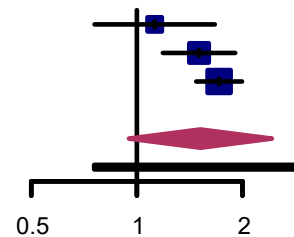
Study	case mean	control mean	Ratio of means [95% CI]
195	263.37	234.32	1.12 [0.76, 1.67]
134	124.67	82.90	1.50 [1.19, 1.91]
42	3209.79	1870.63	1.72 [1.48, 1.99]

Random effects model

Prediction interval

Heterogeneity: $I^2=52.0\%$, $\tau^2=0.0159$, $p=0.1245$

Ratio of Means



OPG

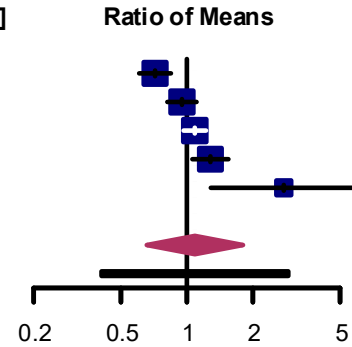
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
26	0.20	0.28	0.72 [0.61, 0.85]
190	232.60	244.96	0.95 [0.81, 1.11]
192	2.13	1.96	1.09 [0.97, 1.22]
13	58.00	45.30	1.28 [1.06, 1.55]
18	719.93	260.12	2.77 [1.29, 5.96]

Random effects model

Prediction interval

Heterogeneity: $I^2=87.1\%$, $\tau^2=0.1006$, $p<0.0001$



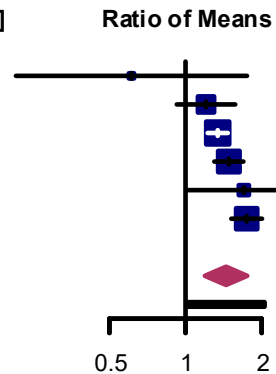
RANKL

Study	case mean	control mean	Ratio of means [95% CI]
18	27.46	44.92	0.61 [0.21, 1.75]
197	233.17	193.49	1.21 [0.92, 1.57]
192	58.90	43.93	1.34 [1.22, 1.47]
26	18.89	12.73	1.48 [1.30, 1.69]
13	31.80	18.70	1.70 [1.02, 2.85]
190	284.52	163.01	1.75 [1.52, 2.01]

Random effects model

Prediction interval

Heterogeneity: $I^2=65.5\%$, $\tau^2=0.0139$, $p=0.0128$



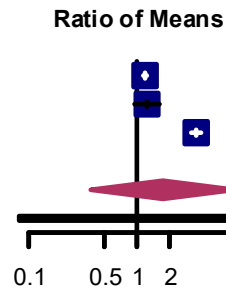
TGF-β

Study	case mean	control mean	Ratio of means [95% CI]
41	28.78	24.17	1.19 [1.15, 1.24]
90	18026.30	14516.66	1.24 [0.95, 1.62]
76	99.89	28.26	3.53 [3.18, 3.92]

Random effects model

Prediction interval

Heterogeneity: $I^2=99.5\%$, $\tau^2=0.3779$, $p<0.0001$



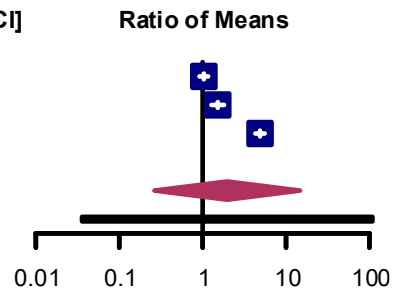
TIMP-1

Study	case mean	control mean	Ratio of means [95% CI]
134	136.13	131.65	1.03 [0.92, 1.17]
195	143.19	94.31	1.52 [1.28, 1.81]
107	110120.00	22570.00	4.88 [4.29, 5.55]

Random effects model

Prediction interval

Heterogeneity: $I^2=99.4\%$, $\tau^2=0.6496$, $p<0.0001$



TNF-α

SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
56	28.98	195.18	0.15 [0.02, 1.03]	
170	80.00	64.60	1.24 [0.81, 1.89]	
116	72.75	53.06	1.37 [1.12, 1.68]	
197	1.55	1.11	1.40 [0.94, 2.07]	
41	24.61	17.25	1.43 [1.36, 1.50]	
51	1.77	1.21	1.46 [0.84, 2.54]	
186	72.30	49.39	1.46 [1.23, 1.74]	
192	241.23	112.33	2.15 [1.58, 2.92]	
55	34.01	15.25	2.23 [1.77, 2.81]	
4	16.84	6.48	2.60 [2.53, 2.67]	
132	21.33	7.67	2.78 [2.03, 3.81]	
81	2.98	0.87	3.43 [2.16, 5.45]	
64	14.46	3.80	3.80 [2.90, 5.00]	
113	70.38	17.94	3.92 [2.90, 5.31]	
48	1078.09	204.75	5.27 [4.59, 6.04]	
183	19.89	1.90	10.47 [6.06, 18.10]	
184	19.89	1.90	10.47 [6.06, 18.10]	
54	13.68	1.24	11.03 [10.21, 11.92]	
76	202.71	11.01	18.41 [13.14, 25.81]	

Random effects model

Prediction interval

Heterogeneity: $I^2=99.2\%$, $\tau^2=0.7765$, $p=0$

C) Subgroup analysis consisting of only non-smokers

ALP

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
139	0.64	0.73	0.88 [0.69, 1.12]	
197	60.80	59.14	1.03 [0.91, 1.16]	
142	102.38	58.88	1.74 [1.66, 1.82]	

Random effects model

Prediction interval

Heterogeneity: $I^2=97.7\%$, $\tau^2=0.1246$, $p<0.0001$

CCL-2

Study	case mean	control mean	Ratio of means [95% CI]	Ratio of Means
74	8.14	8.41	0.97 [0.85, 1.10]	
194	27.60	22.84	1.21 [0.82, 1.78]	
67	82.43	48.59	1.70 [1.38, 2.08]	
199	157.45	92.00	1.71 [1.38, 2.13]	
61	101.17	45.28	2.23 [1.88, 2.66]	
15	451.07	153.75	2.93 [2.65, 3.25]	
144	465.80	155.20	3.00 [2.61, 3.45]	

Random effects model

Prediction interval

Heterogeneity: $I^2=97.3\%$, $\tau^2=0.1762$, $p<0.0001$

Fetuin A

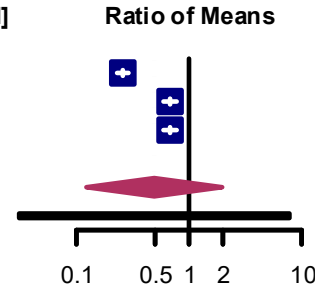
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
131	566·16	2192·66	0·26 [0·23, 0·29]
183	347·83	512·18	0·68 [0·59, 0·78]
184	347830·00	512180·00	0·68 [0·59, 0·78]

Random effects model

Prediction interval

Heterogeneity: $I^2= 98.7\%$, $\tau^2= 0.3082$, $p < 0.0001$



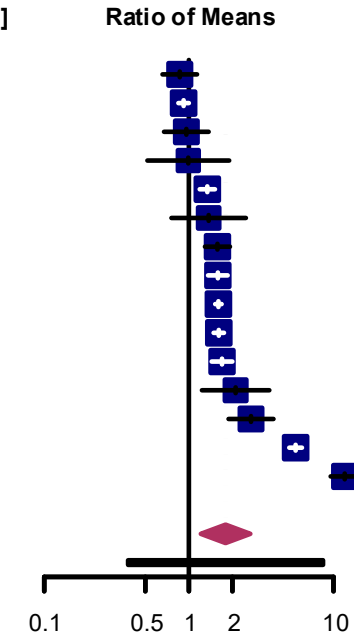
IL-1β

Study	case mean	control mean	Ratio of means [95% CI]
24	16·72	19·33	0·86 [0·66, 1·14]
34	8·01	8·71	0·92 [0·85, 1·00]
36	4·01	4·17	0·96 [0·67, 1·37]
56	4·69	4·74	0·99 [0·52, 1·90]
192	651·13	485·43	1·34 [1·19, 1·51]
150	0·15	0·11	1·37 [0·76, 2·48]
186	62·91	39·91	1·58 [1·29, 1·92]
161	4·14	2·61	1·59 [1·36, 1·85]
126	4·99	3·12	1·60 [1·52, 1·68]
84	245·06	152·19	1·61 [1·48, 1·75]
27	19·39	11·44	1·69 [1·44, 2·00]
197	163·13	77·49	2·11 [1·23, 3·60]
89	3440·09	1279·10	2·69 [1·88, 3·85]
54	19·70	3·60	5·47 [4·95, 6·05]
76	84·02	7·03	11·95 [9·56, 14·94]

Random effects model

Prediction interval

Heterogeneity: $I^2= 98.7\%$, $\tau^2= 0.4893$, $p < 0.0001$



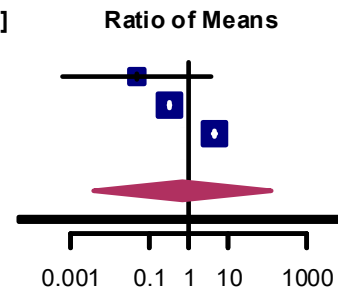
IL-4

Study	case mean	control mean	Ratio of means [95% CI]
150	1·80	37·24	0·05 [0·00, 3·74]
4	27·46	84·20	0·33 [0·32, 0·34]
54	0·15	0·03	4·53 [4·20, 4·89]

Random effects model

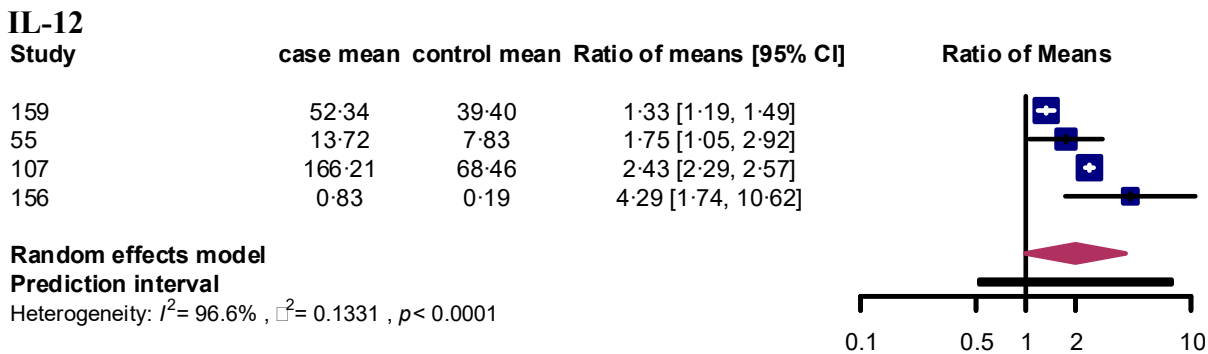
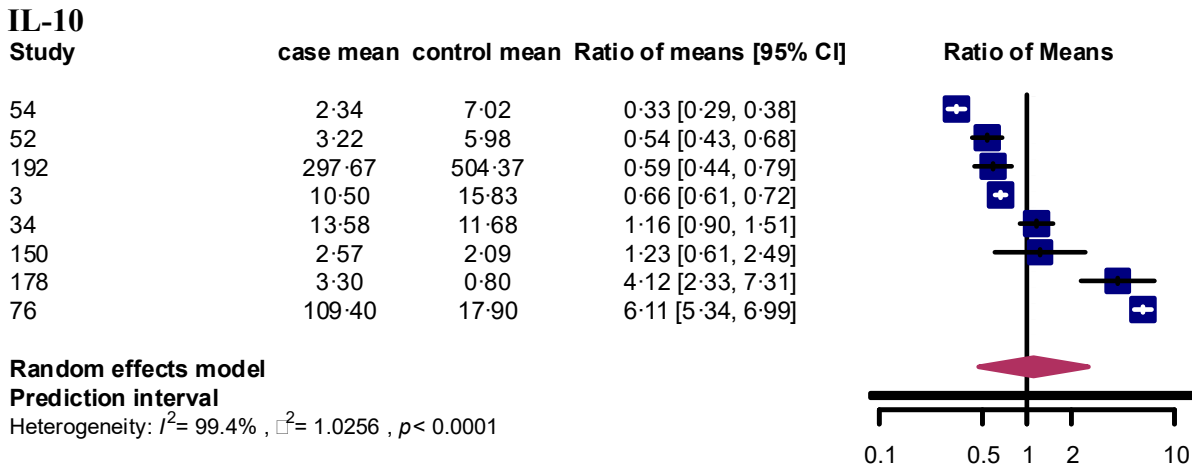
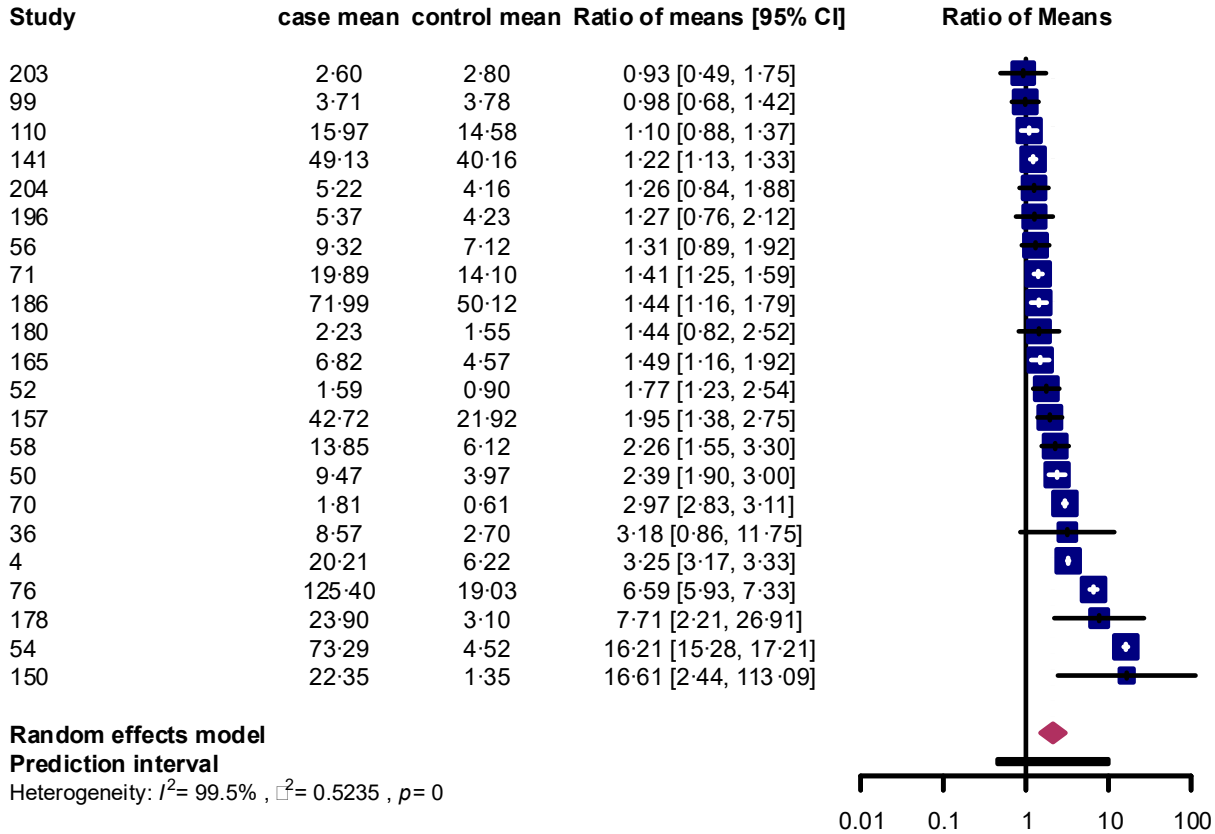
Prediction interval

Heterogeneity: $I^2= 99.9\%$, $\tau^2= 3.5003$, $p = 0$



IL-6

SUPPLEMENTARY DATA



SUPPLEMENTARY DATA

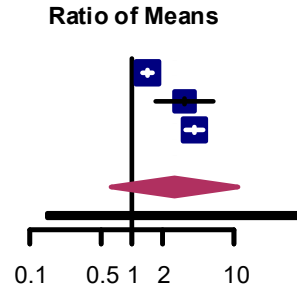
IL-18

Study	case mean	control mean	Ratio of means [95% CI]
159	395.78	278.20	1.42 [1.27, 1.59]
84	349.85	106.74	3.28 [1.71, 6.28]
130	47.09	11.49	4.10 [3.36, 4.99]

Random effects model

Prediction interval

Heterogeneity: $I^2=97.7\%$, $\tau^2=0.3247$, $p<0.0001$



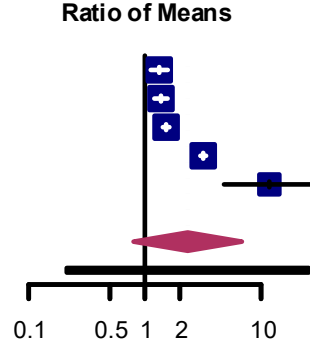
Leptin

Study	case mean	control mean	Ratio of means [95% CI]
148	10749.00	8085.00	1.33 [1.12, 1.57]
87	12082.00	8783.00	1.38 [1.21, 1.57]
149	11600.00	7616.62	1.52 [1.43, 1.62]
8	7.82	2.46	3.18 [3.00, 3.36]
203	294.70	25.00	11.79 [4.80, 28.97]

Random effects model

Prediction interval

Heterogeneity: $I^2=99.0\%$, $\tau^2=0.6155$, $p<0.0001$



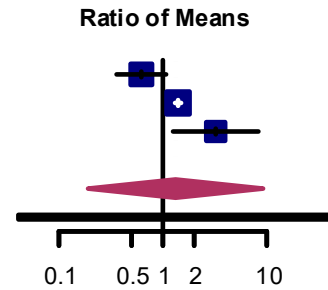
MIF

Study	case mean	control mean	Ratio of means [95% CI]
194	1383.89	2230.37	0.62 [0.36, 1.07]
137	9.91	7.08	1.40 [1.31, 1.50]
136	7797.50	2419.00	3.22 [1.25, 8.30]

Random effects model

Prediction interval

Heterogeneity: $I^2=82.4\%$, $\tau^2=0.4689$, $p=0.0034$



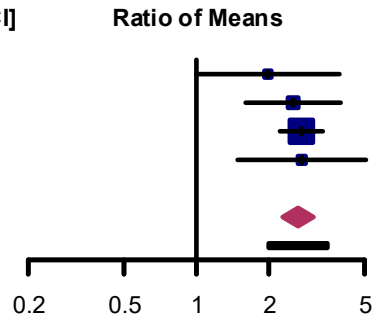
MMP-8

Study	case mean	control mean	Ratio of means [95% CI]
195	33.85	17.08	1.98 [1.00, 3.93]
88	116.05	45.98	2.52 [1.60, 3.98]
192	4150.00	1520.00	2.73 [2.22, 3.35]
65	54.22	19.78	2.74 [1.48, 5.06]

Random effects model

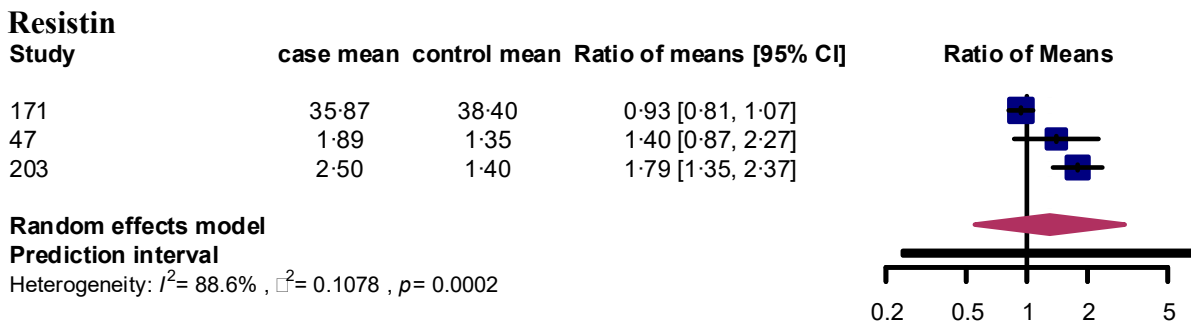
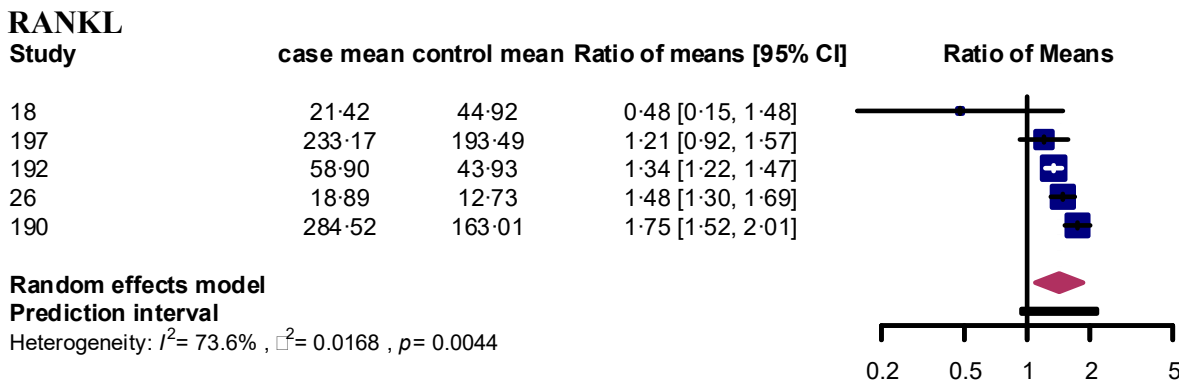
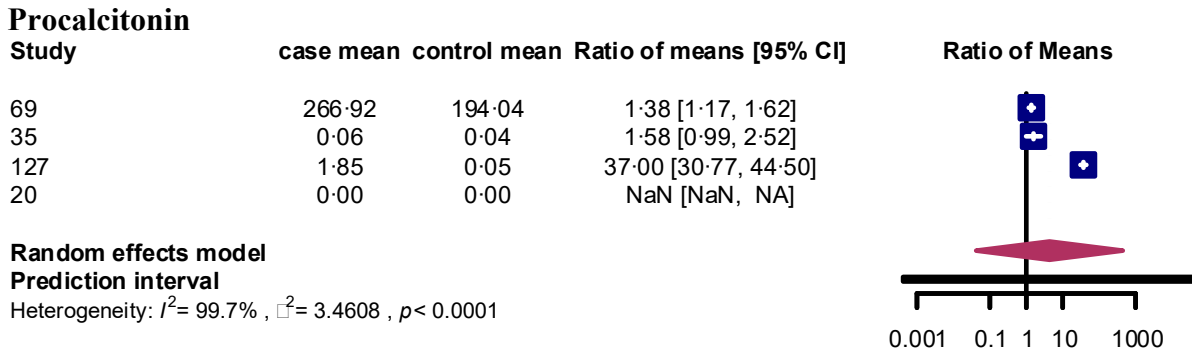
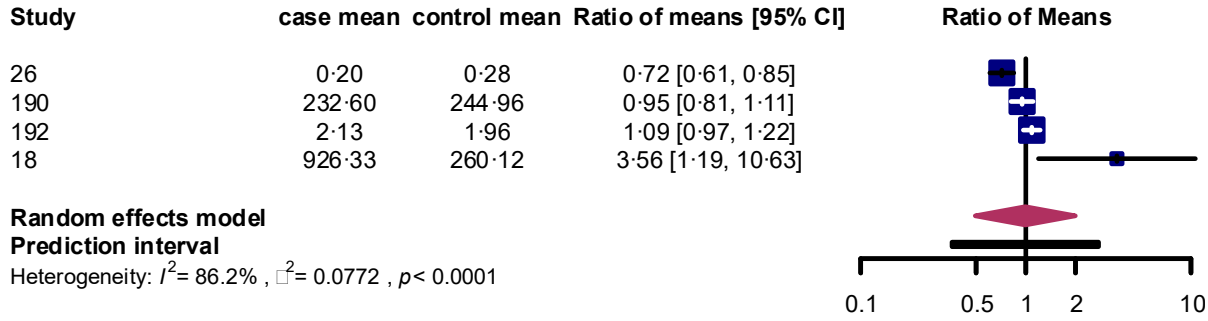
Prediction interval

Heterogeneity: $I^2=0.0\%$, $\tau^2=0$, $p=0.8426$



OPG

SUPPLEMENTARY DATA



SIRT1

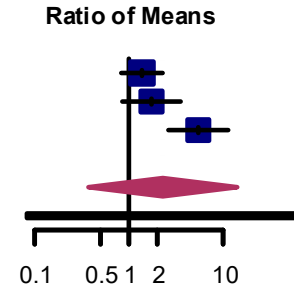
SUPPLEMENTARY DATA

Study	case mean	control mean	Ratio of means [95% CI]
32	1.06	0.77	1.38 [0.83, 2.28]
31	0.80	0.46	1.74 [0.85, 3.54]
95	6.06	1.11	5.46 [2.63, 11.33]

Random effects model

Prediction interval

Heterogeneity: $I^2= 79.0\%$, $\tau^2= 0.4194$, $p= 0.0086$



TNF- α

Study	case mean	control mean	Ratio of means [95% CI]
56	28.98	195.18	0.15 [0.02, 1.03]
36	13.06	12.71	1.03 [0.53, 1.98]
116	72.75	53.06	1.37 [1.12, 1.68]
52	4.53	3.29	1.38 [0.95, 2.00]
197	1.55	1.11	1.40 [0.94, 2.07]
51	1.77	1.21	1.46 [0.84, 2.54]
186	72.30	49.39	1.46 [1.23, 1.74]
126	10.54	7.19	1.47 [1.40, 1.53]
203	3.20	2.10	1.52 [1.09, 2.13]
192	241.23	112.33	2.15 [1.58, 2.92]
55	34.01	15.25	2.23 [1.77, 2.81]
4	16.84	6.48	2.60 [2.53, 2.67]
132	21.33	7.67	2.78 [2.03, 3.81]
81	2.98	0.87	3.43 [2.16, 5.45]
113	70.38	17.94	3.92 [2.90, 5.31]
150	7.94	1.85	4.29 [0.72, 25.42]
48	1078.09	204.75	5.27 [4.59, 6.04]
183	19.89	1.90	10.47 [6.06, 18.10]
184	19.89	1.90	10.47 [6.06, 18.10]
54	13.68	1.24	11.03 [10.21, 11.92]
76	202.71	11.01	18.41 [13.14, 25.81]

Random effects model

Prediction interval

Heterogeneity: $I^2= 99.2\%$, $\tau^2= 0.7756$, $p= 0$

