Title: Neutrophils in cardiovascular disease
References

1. Drechsler M, Megens RT, van Zandvoort M, Weber C, Soehnlein O. Hyperlipidemia-triggered neutrophilia promotes early atherosclerosis. Circulation. 2010 Nov;122(18):1837-45. PubMed PMID: 20956207. Epub 2010/10/18. eng.
2. Seimon TA, Nadolski MJ, Liao X, Magallon J, Nguyen M, Feric NT, et al. Atherogenic lipids and lipoproteins trigger CD36-TLR2-dependent apoptosis in macrophages undergoing endoplasmic reticulum stress. Cell Metab. 2010 Nov;12(5):467-82. PubMed PMID: 21035758. PMCID: PMC2991104. eng.
3. Yvan-Charvet L, Ranalletta M, Wang N, Han S, Terasaka N, Li R, et al. Combined deficiency of ABCA1 and ABCG1 promotes foam cell accumulation and accelerates atherosclerosis in mice. J Clin Invest. 2007 Dec;117(12):3900-8. PubMed PMID: 17992262. PMCID: PMC2066200. eng.
4. Zernecke A, Bot I, Djalali-Talab Y, Shagdarsuren E, Bidzhekov K, Meiler S, et al. Protective role of CXC receptor 4/CXC ligand 12 unveils the importance of neutrophils in atherosclerosis. Circ Res. 2008 Feb;102(2):209-17. PubMed PMID: 17991882. Epub 2007/11/08. eng.
5. Stroka KM, Levitan I, Aranda-Espinoza H. OxLDL and substrate stiffness promote neutrophil transmigration by enhanced endothelial cell contractility and ICAM-1. J Biomech. 2012 Jun;45(10):1828-34. PubMed PMID: 22560286. PMCID: PMC3376185. Epub 2012/05/02. eng.
6. Larionov S, Dedeck O, Birkenmeier G, Thal DR. Expression of alpha2-macroglobulin, neutrophil elastase, and interleukin-1alpha differs in early-stage and late-stage atherosclerotic lesions in the arteries of the circle of Willis. Acta Neuropathol. 2007 Jan;113(1):33-43. PubMed PMID: 16957923. Epub 2006/09/07. eng.
7. Soehnlein O, Zernecke A, Eriksson EE, Rothfuchs AG, Pham CT, Herwald H, et al. Neutrophil secretion products pave the way for inflammatory monocytes. Blood. 2008 Aug;112(4):1461-71. PubMed PMID: 18490516. PMCID: PMC3400540. Epub 2008/05/19. eng.
8. Soehnlein O, Xie X, Ulbrich H, Kenne E, Rotzius P, Flodgaard H, et al. Neutrophil-derived heparin-binding protein (HBP/CAP37) deposited on endothelium enhances monocyte arrest under flow conditions. J Immunol. 2005 May;174(10):6399-405. PubMed PMID: 15879141. eng.
9. Lee TD, Gonzalez ML, Kumar P, Grammas P, Pereira HA. CAP37, a neutrophil-derived inflammatory mediator, augments leukocyte adhesion to endothelial monolayers. Microvasc Res. 2003 Jul;66(1):38-48. PubMed PMID: 12826073. eng.
10. Herman MP, Sukhova GK, Libby P, Gerdes N, Tang N, Horton DB, et al. Expression of neutrophil collagenase (matrix metalloproteinase-8) in human atheroma: a novel collagenolytic pathway suggested by transcriptional profiling. Circulation. 2001 Oct;104(16):1899-904. PubMed PMID: 11602491. eng.
11. Daugherty A, Dunn JL, Rateri DL, Heinecke JW. Myeloperoxidase, a catalyst for lipoprotein oxidation, is expressed in human atherosclerotic lesions. J Clin Invest. 1994 Jul;94(1):437-44. PubMed PMID: 8040285. PMCID: PMC296328. eng.
12. Hosokawa T, Kumon Y, Kobayashi T, Enzan H, Nishioka Y, Yuri K, et al. Neutrophil infiltration and oxidant-production in human atherosclerotic carotid plaques. Histol Histopathol. 2011 01;26(1):1-11. PubMed PMID: 21117022. eng.
13. Scannell M, Flanagan MB, deStefani A, Wynne KJ, Cagney G, Godson C, et al. Annexin-1 and peptide derivatives are released by apoptotic cells and stimulate phagocytosis

of apoptotic neutrophils by macrophages. J Immunol. 2007 Apr;178(7):4595-605. PubMed PMID: 17372018. eng.
14. Stocker R, Keaney JF. Role of oxidative modifications in atherosclerosis. Physiol Rev. 2004 Oct;84(4):1381-478. PubMed PMID: 15383655. eng.
15. Darbousset R, Thomas GM, Mezouar S, Frère C, Bonier R, Mackman N, et al. Tissue factor-positive neutrophils bind to injured endothelial wall and initiate thrombus formation. Blood. 2012 Sep;120(10):2133-43. PubMed PMID: 22837532. Epub 2012/07/26. eng.
16. Massberg S, Grahl L, von Bruehl ML, Manukyan D, Pfeiler S, Goosmann C, et al. Reciprocal coupling of coagulation and innate immunity via neutrophil serine proteases. Nat Med. 2010 Aug;16(8):887-96. PubMed PMID: 20676107. Epub 2010/08/01. eng.
17. Vanichakarn P, Blair P, Wu C, Freedman JE, Chakrabarti S. Neutrophil CD40 enhances platelet-mediated inflammation. Thromb Res. 2008;122(3):346-58. PubMed PMID: 18289643. Epub 2008/03/04. eng.
18. Litt MR, Jeremy RW, Weisman HF, Winkelstein JA, Becker LC. Neutrophil depletion limited to reperfusion reduces myocardial infarct size after 90 minutes of ischemia. Evidence for neutrophil-mediated reperfusion injury. Circulation. 1989 Dec;80(6):1816-27. PubMed PMID: 2598440. eng.
19. Vinten-Johansen J. Involvement of neutrophils in the pathogenesis of lethal myocardial reperfusion injury. Cardiovasc Res. 2004 Feb;61(3):481-97. PubMed PMID: 14962479. eng.
20. Nahrendorf M, Swirski FK, Aikawa E, Stangenberg L, Wurdinger T, Figueiredo JL, et al. The healing myocardium sequentially mobilizes two monocyte subsets with divergent and complementary functions. J Exp Med. 2007 Nov;204(12):3037-47. PubMed PMID: 18025128. PMCID: PMC2118517. Epub 2007/11/19. eng.
21. Dutta P, Courties G, Wei Y, Leuschner F, Gorbatov R, Robbins CS, et al. Myocardial infarction accelerates atherosclerosis. Nature. 2012 Jul;487(7407):325-9. PubMed PMID: 22763456. PMCID: PMC3401326. eng.
22. Goldstein JA, Demetriou D, Grines CL, Pica M, Shoukfeh M, O'Neill WW. Multiple complex coronary plaques in patients with acute myocardial infarction. N Engl J Med. 2000 Sep;343(13):915-22. PubMed PMID: 11006367. eng.
23. Milonas C, Jernberg T, Lindbäck J, Agewall S, Wallentin L, Stenestrand U, et al. Effect of Angiotensin-converting enzyme inhibition on one-year mortality and frequency of repeat acute myocardial infarction in patients with acute myocardial infarction. Am J Cardiol. 2010 May;105(9):1229-34. PubMed PMID: 20403471. Epub 2010/03/11. eng.
24. Brinkmann V, Reichard U, Goosmann C, Fauler B, Uhlemann Y, Weiss DS, et al. Neutrophil extracellular traps kill bacteria. Science. 2004 Mar;303(5663):1532-5. PubMed PMID: 15001782. eng.
25. Yousefi S, Simon HU. NETosis - Does It Really Represent Nature's "Suicide Bomber"? Front Immunol. 2016;7:328. PubMed PMID: 27617015. PMCID: PMC4999959. Epub 2016/08/26. eng.
26. Jorch SK, Kubes P. An emerging role for neutrophil extracellular traps in noninfectious disease. Nat Med. 2017 Mar;23(3):279-87. PubMed PMID: 28267716. eng.
27. Gupta AK, Joshi MB, Philippova M, Erne P, Hasler P, Hahn S, et al. Activated endothelial cells induce neutrophil extracellular traps and are susceptible to NETosis-mediated cell death. FEBS Lett. 2010 Jul;584(14):3193-7. PubMed PMID: 20541553. Epub 2010/06/10. eng.
28. Etulain J, Martinod K, Wong SL, Cifuni SM, Schattner M, Wagner DD. P-selectin promotes neutrophil extracellular trap formation in mice. Blood. 2015 Jul;126(2):242-6. PubMed PMID: 25979951. PMCID: PMC4497964. Epub 2015/05/15. eng.

29. Borissoff JI, Joosen IA, Versteylen MO, Brill A, Fuchs TA, Savchenko AS, et al. Elevated levels of circulating DNA and chromatin are independently associated with severe coronary atherosclerosis and a prothrombotic state. Arterioscler Thromb Vasc Biol. 2013 Aug;33(8):2032-40. PubMed PMID: 23818485. PMCID: PMC3806482. Epub 2013/07/01. eng.
30. Megens RT, Vijayan S, Lievens D, Döring Y, van Zandvoort MA, Grommes J, et al. Presence of luminal neutrophil extracellular traps in atherosclerosis. Thromb Haemost. 2012 Mar;107(3):597-8. PubMed PMID: 22318427. Epub 2012/02/08. eng.
31. Fuchs TA, Brill A, Duerschmied D, Schatzberg D, Monestier M, Myers DD, et al. Extracellular DNA traps promote thrombosis. Proc Natl Acad Sci U S A. 2010 Sep;107(36):15880-5. PubMed PMID: 20798043. PMCID: PMC2936604. Epub 2010/08/23. eng.
32. Stakos DA, Kambas K, Konstantinidis T, Mitroulis I, Apostolidou E, Arelaki S, et al. Expression of functional tissue factor by neutrophil extracellular traps in culprit artery of acute myocardial infarction. Eur Heart J. 2015 Jun;36(22):1405-14. PubMed PMID: 25660055. PMCID: PMC4458286. Epub 2015/02/07. eng.
33. Kambas K, Chrysanthopoulou A, Vassilopoulos D, Apostolidou E, Skendros P, Girod A, et al. Tissue factor expression in neutrophil extracellular traps and neutrophil derived microparticles in antineutrophil cytoplasmic antibody associated vasculitis may promote thromboinflammation and the thrombophilic state associated with the disease. Ann Rheum Dis. 2014 Oct;73(10):1854-63. PubMed PMID: 23873874. eng.
34. Riegger J, Byrne RA, Joner M, Chandraratne S, Gershlick AH, Ten Berg JM, et al. Histopathological evaluation of thrombus in patients presenting with stent thrombosis. A multicenter European study: a report of the prevention of late stent thrombosis by an interdisciplinary global European effort consortium. Eur Heart J. 2016 May;37(19):1538-49. PubMed PMID: 26761950. PMCID: PMC4872283. Epub 2015/08/30. eng.
35. de Boer OJ, Li X, Teeling P, Mackaay C, Ploegmakers HJ, van der Loos CM, et al. Neutrophils, neutrophil extracellular traps and interleukin-17 associate with the organisation of thrombi in acute myocardial infarction. Thromb Haemost. 2013 Feb;109(2):290-7. PubMed PMID: 23238559. Epub 2012/12/13. eng.
36. Mangold A, Alias S, Scherz T, Hofbauer T, Jakowitsch J, Panzenböck A, et al. Coronary neutrophil extracellular trap burden and deoxyribonuclease activity in ST-elevation acute coronary syndrome are predictors of ST-segment resolution and infarct size. Circ Res. 2015 Mar;116(7):1182-92. PubMed PMID: 25547404. Epub 2014/12/29. eng.
37. Ge L, Zhou X, Ji WJ, Lu RY, Zhang Y, Zhang YD, et al. Neutrophil extracellular traps in ischemia-reperfusion injury-induced myocardial no-reflow: therapeutic potential of DNase-based reperfusion strategy. Am J Physiol Heart Circ Physiol. 2015 Mar;308(5):H500-9. PubMed PMID: 25527775. Epub 2014/12/19. eng.
38. Sumby P, Barbian KD, Gardner DJ, Whitney AR, Welty DM, Long RD, et al. Extracellular deoxyribonuclease made by group A Streptococcus assists pathogenesis by enhancing evasion of the innate immune response. Proc Natl Acad Sci U S A. 2005 Feb;102(5):1679-84. PubMed PMID: 15668390. PMCID: PMC547841. Epub 2005/01/24. eng.
39. Buchanan JT, Simpson AJ, Aziz RK, Liu GY, Kristian SA, Kotb M, et al. DNase expression allows the pathogen group A Streptococcus to escape killing in neutrophil extracellular traps. Curr Biol. 2006 Feb;16(4):396-400. PubMed PMID: 16488874. eng.
40. Beiter K, Wartha F, Albiger B, Normark S, Zychlinsky A, Henriques-Normark B. An endonuclease allows Streptococcus pneumoniae to escape from neutrophil extracellular traps. Curr Biol. 2006 Feb;16(4):401-7. PubMed PMID: 16488875. eng.

41. von Brühl ML, Stark K, Steinhart A, Chandraratne S, Konrad I, Lorenz M, et al. Monocytes, neutrophils, and platelets cooperate to initiate and propagate venous thrombosis in mice in vivo. J Exp Med. 2012 Apr;209(4):819-35. PubMed PMID: 22451716. PMCID: PMC3328366. Epub 2012/03/26. eng.
42. Brill A, Fuchs TA, Savchenko AS, Thomas GM, Martinod K, De Meyer SF, et al. Neutrophil extracellular traps promote deep vein thrombosis in mice. J Thromb Haemost. 2012 Jan;10(1):136-44. PubMed PMID: 22044575. PMCID: PMC3319651. eng.
43. De Meyer SF, Suidan GL, Fuchs TA, Monestier M, Wagner DD. Extracellular chromatin is an important mediator of ischemic stroke in mice. Arterioscler Thromb Vasc Biol. 2012 Aug;32(8):1884-91. PubMed PMID: 22628431. PMCID: PMC3494463. Epub 2012/05/24. eng.
44. Savchenko AS, Borissoff JI, Martinod K, De Meyer SF, Gallant M, Erpenbeck L, et al. VWF-mediated leukocyte recruitment with chromatin decondensation by PAD4 increases myocardial ischemia/reperfusion injury in mice. Blood. 2014 Jan;123(1):141-8. PubMed PMID: 24200682. PMCID: PMC3879903. Epub 2013/11/07. eng.
45. Mehta J, Dinerman J, Mehta P, Saldeen TG, Lawson D, Donnelly WH, et al. Neutrophil function in ischemic heart disease. Circulation. 1989 Mar;79(3):549-56. PubMed PMID: 2537159. eng.
46. Dinerman JL, Mehta JL, Saldeen TG, Emerson S, Wallin R, Davda R, et al. Increased neutrophil elastase release in unstable angina pectoris and acute myocardial infarction. J Am Coll Cardiol. 1990 Jun;15(7):1559-63. PubMed PMID: 2345235. eng.
47. Bell D, Jackson M, Nicoll JJ, Millar A, Dawes J, Muir AL. Inflammatory response, neutrophil activation, and free radical production after acute myocardial infarction: effect of thrombolytic treatment. Br Heart J. 1990 Feb;63(2):82-7. PubMed PMID: 2317413. PMCID: PMC1024331. eng.
48. Amaro A, Gude F, González-Juanatey JR, Iglesias C, Fernández-Vázquez F, Varela-Duran J, et al. Activity of leucocyte elastase in women with coronary artery disease documented using angiography. J Cardiovasc Risk. 1995 Apr;2(2):149-53. PubMed PMID: 7606652. eng.
49. Koşar F, Varol E, Ayaz S, Kütük E, Oğuzhan A, Diker E. Plasma leukocyte elastase concentration and coronary artery disease. Angiology. 1998 Mar;49(3):193-201. PubMed PMID: 9523542. eng.
50. Smith FB, Fowkes FG, Rumley A, Lee AJ, Lowe GD, Hau CM. Tissue plasminogen activator and leucocyte elastase as predictors of cardiovascular events in subjects with angina pectoris: Edinburgh Artery Study. Eur Heart J. 2000 Oct;21(19):1607-13. PubMed PMID: 10988013. eng.
51. Heslop CL, Frohlich JJ, Hill JS. Myeloperoxidase and C-reactive protein have combined utility for long-term prediction of cardiovascular mortality after coronary angiography. J Am Coll Cardiol. 2010 Mar;55(11):1102-9. PubMed PMID: 20223364. eng.
52. Zhang R, Brennan ML, Fu X, Aviles RJ, Pearce GL, Penn MS, et al. Association between myeloperoxidase levels and risk of coronary artery disease. JAMA. 2001 Nov;286(17):2136-42. PubMed PMID: 11694155. eng.
53. Buffon A, Biasucci LM, Liuzzo G, D'Onofrio G, Crea F, Maseri A. Widespread coronary inflammation in unstable angina. N Engl J Med. 2002 Jul;347(1):5-12. PubMed PMID: 12097534. eng.
54. Roman RM, Camargo PV, Borges FK, Rossini AP, Polanczyk CA. Prognostic value of myeloperoxidase in coronary artery disease: comparison of unstable and stable angina patients. Coron Artery Dis. 2010 May;21(3):129-36. PubMed PMID: 20305551. eng.

55. Salonen I, Huttunen K, Hirvonen MR, Dufva J, Groundstroem K, Dufva H, et al. Serum myeloperoxidase is independent of the risk factors of atherosclerosis. Coron Artery Dis. 2012 Jun;23(4):251-8. PubMed PMID: 22495256. eng.
56. Takeshita S, Isshiki T, Ochiai M, Ishikawa T, Nishiyama Y, Fusano T, et al. Systemic inflammatory responses in acute coronary syndrome: increased activity observed in polymorphonuclear leukocytes but not T lymphocytes. Atherosclerosis. 1997 Dec;135(2):187-92. PubMed PMID: 9430368. eng.
57. Avanzas P, Arroyo-Espliguero R, Cosín-Sales J, Quiles J, Zouridakis E, Kaski JC. Multiple complex stenoses, high neutrophil count and C-reactive protein levels in patients with chronic stable angina. Atherosclerosis. 2004 Jul;175(1):151-7. PubMed PMID: 15186960. eng.
58. Grau AJ, Boddy AW, Dukovic DA, Buggle F, Lichy C, Brandt T, et al. Leukocyte count as an independent predictor of recurrent ischemic events. Stroke. 2004 May;35(5):1147-52. PubMed PMID: 15017013. Epub 2004/03/11. eng.
59. Gillum RF, Mussolino ME, Madans JH. Counts of neutrophils, lymphocytes, and monocytes, cause-specific mortality and coronary heart disease: the NHANES-I epidemiologic follow-up study. Ann Epidemiol. 2005 Apr;15(4):266-71. PubMed PMID: 15780773. eng.
60. Horne BD, Anderson JL, John JM, Weaver A, Bair TL, Jensen KR, et al. Which white blood cell subtypes predict increased cardiovascular risk? J Am Coll Cardiol. 2005 May;45(10):1638-43. PubMed PMID: 15893180. Epub 2005/04/25. eng.
61. Husser O, Bodi V, Sanchis J, Nunez J, Mainar L, Chorro FJ, et al. White blood cell subtypes after STEMI: temporal evolution, association with cardiovascular magnetic resonance--derived infarct size and impact on outcome. Inflammation. 2011 Apr;34(2):73-84. PubMed PMID: 20419392. eng.
62. Park BJ, Shim JY, Lee HR, Lee JH, Jung DH, Kim HB, et al. Relationship of neutrophil-lymphocyte ratio with arterial stiffness and coronary calcium score. Clin Chim Acta. 2011 May;412(11-12):925-9. PubMed PMID: 21266168. Epub 2011/01/23. eng.