

# Publication List

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Key Publication





## AGE Reader Key Publications

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- **Skin autofluorescence provides additional information to the UK Prospective Diabetes Study (UKPDS) risk score for the estimation of cardiovascular prognosis in type 2 diabetes mellitus.**  
Lutgers H. et al, Diabetologia, 2009; 52(5): 789-797
- **Skin autofluorescence and risk of micro- and macrovascular complications in patients with Type 2 diabetes mellitus-a multi-centre study.**  
Noordzij M.J. et al. Diabet Med. 2012 Dec;29(12):1556-61.
- **Skin Autofluorescence and the Association with Renal and Cardiovascular Risk Factors in Chronic Kidney Disease Stage 3.**  
McIntyre N. et al. Clin J Am Soc Nephrol. 2011 Sep 1. Epub
- **Skin Autofluorescence: A tool to identify type 2 diabetic patients at risk for developing microvascular disease.**  
Gerrits E. et al. Diabetes Care. 2008; 31: 517-521
- **Messung der Autofluoreszenz der Haut.**  
Stirban A. and Heinemann L. Diabetes Stoffw Herz. 2013; 22 (full text available)
- **Simple non-invasive assessment of advanced glycation endproducts accumulation.**  
Meerwaldt R et al, Diabetologia, 2004; 47:1324-1330

## AGE Reader in diabetes

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1. **Messung der Autofluoreszenz der Haut.**  
Stirban A. and Heinemann L. Diabetes Stoffw Herz. 2013; 22 (full text available)
2. **Skin autofluorescence relates to soluble receptor for advanced glycation end-products and albuminuria in diabetes mellitus.**  
Skrha J Jr. et al. J Diabetes Res. Epub 2013 Mar 10.
3. **Skin autofluorescence based decision tree in detection of impaired glucose tolerance and diabetes.**  
Smit AJ. et al. PLoS One. 2013 Jun 4;8(6):e65592.
4. **Potential inhibitory effects of L-carnitine supplementation on tissue advanced glycation end products in patients with hemodialysis.**  
Fukami K. Rejuvenation Res. 2013 Aug 4. [Epub ahead of print]
5. **Skin autofluorescence relates to soluble receptor for advanced glycation end-products and albuminuria in diabetes mellitus.**  
Skrha J Jr. et al. J Diabetes Res. 2013;2013:650694.
6. **Skin autofluorescence is associated with past glycaemic control and complications in type 1 diabetes mellitus.**  
Genevieve M. et al. Diabetes Metab. 2013 May 2. [Epub ahead of print]
7. **Advanced Glycation End Products Assessed by Skin Autofluorescence-A New Marker of Diabetic Foot Ulceration.**  
Vouillarmet J. et al. Diabetes Technol Ther. 2013 Apr 30. [Epub ahead of print]
8. **Study design of DIACORE (DIAbetes COHoRtE) - a cohort study of patients with diabetes mellitus type 2.**  
Dörhöfer L, BMC Med Genet. 2013 Feb 14;14:25.
9. **Verification of Skin Autofluorescence Values by Mass Spectrometry in Adolescents with Type 1 Diabetes: Brief Report.**  
Mácsai E. et al. Diabetes Technol Ther. 2013 Jan 23.

- 10. Advanced glycation end products in infant formulas do not contribute to insulin resistance associated with their consumption.**  
Klenovics KS. et al. PLoS One. 2013;8(1):e53056.
- 11. Advanced Glycation End Products, Measured as Skin Autofluorescence, During Normal Pregnancy and Pregnancy Complicated by Diabetes Mellitus.**  
de Ranitz-Greven WL. et al. Diabetes Technol Ther. 2012 Oct 31. (Epub)
- 12. Skin autofluorescence measurement in diabetological and nephrological clinical practice.**  
Mácsai E. et al. Orv Hetil. 2012 Oct 21;153(42):1651-7.
- 13. Skin autofluorescence and risk of micro- and macrovascular complications in patients with Type 2 diabetes mellitus-a multi-centre study.**  
Noordzij M.J. et al. Diabet Med. 2012 Aug 31. doi: 10.1111/dme.12005.
- 14. Advanced glycation end products measured by skin autofluorescence in a population with central obesity.**  
den Engelsen C. et al. Dermatoendocrinol. 2012 Jan 1;4(1):33-8.
- 15. Elevated skin autofluorescence is strongly associated with foot ulcers in patients with diabetes: a cross-sectional, observational study of Chinese subjects.**  
Hu H. et al. J Zhejiang Univ Sci B. 2012 May;13(5):372-7.
- 16. Advanced Glycation Endproducts and Diabetic Cardiovascular Disease.**  
Prasad A. et al. Cardiol Rev. 2012 Feb 6. Epub
- 17. Non-invasive measures of tissue autofluorescence are increased in Type 1 diabetes complications and correlate with a non-invasive measure of vascular dysfunction.**  
Januszewski A.S. et al. Diabet Med. 2011 Dec 28. doi: 10.1111/j.1464-5491.2011.03562.x.
- 18. Skin autofluorescence is associated with severity of vascular complications in Japanese patients with Type 2 diabetes.** Tanaka K. et al. Diabet Med. 2011 Sep 14. Epub
- 19. Skin autofluorescence is inversely related to HDL anti-oxidative capacity in type 2 diabetes mellitus.**  
Mulder D. et al. Atherosclerosis. 2011 May, Epub
- 20. Advanced Glycation End Products, Measured as Skin Autofluorescence, at Diagnosis in Gestational Diabetes Mellitus Compared with Normal Pregnancy.**  
de Ranitz-Greven WL et al. Diabetes Technol Ther. 2011 Aug 29. Epub
- 21. Increased accumulation of skin advanced glycation end products is associated with microvascular complications in type 1 diabetes.**  
Araszkiewicz A. et al. Diabetes Technol Ther. 2011 Aug;13(8):837-42.
- 22. Assessment of skin autofluorescence as a marker of advanced glycation end product accumulation in type 1 diabetes.**  
Samborski P. et al. Pol Arch Med Wewn. 2011 Mar;121(3):67-72.
- 23. Advanced glycation end products, measured as skin autofluorescence and diabetes complications: a systematic review.**  
Bos D.C. et al. Diabetes Technol Ther. 2011 Jul;13(7):773-9.
- 24. Tissue advanced glycation end products are associated with diastolic function and aerobic exercise capacity in diabetic heart failure patients.**  
Willemsen S. et al. Eur J. Heart Fail 2010. doi:10.1093/eurjhf/hfq168
- 25. Skin autofluorescence and glycemic variability.**  
Noordzij M. et al. Diabetes Technol Ther. 2010; 12(7): 581-585
- 26. Advanced glycation end products assessed by skin autofluorescence in type 1 diabetics are associated with nephropathy, but not retinopathy.**  
Chabroux S. et al: Diabetes Metab, 2010 Apr;36(2):152-7.
- 27. Skin autofluorescence provides additional information to the UK Prospective Diabetes Study (UKPDS) risk score for the estimation of cardiovascular prognosis in type 2 diabetes mellitus**  
Lutgers H. et al: Diabetologia, 2009; 52(5): 789-797

- 28. Skin Autofluorescence: A tool to identify type 2 diabetic patients at risk for developing microvascular disease.**  
Gerrits E. et al. Diabetes Care. 2008; 31: 517-521
- 29. Skin autofluorescence is a strong predictor of cardiac mortality in diabetes**  
Meerwaldt R, et al. Diabetes Care 2007, 30: 107-112
- 30. Skin autofluorescence in type 2 diabetes: Beyond blood glucose**  
Monami M. et al. Diabetes Research & Clinical Practice July 2007. epub
- 31. Non-invasive AGE-measurements by skin autofluorescence in patients with Type 2 Diabetes Mellitus. Tool for risk-assessment of diabetes complications?**  
Lutgers H, et al. Diabetes Care. 2006 Dec;29(12):2654-9
- 32. Increased accumulation of skin advanced glycation end-products precedes and correlates with clinical manifestation of diabetic neuropathy**  
Meerwaldt R, et al. Diabetologia. 2005;48:1637-44.
- 33. The clinical relevance of advanced glycation endproducts (AGE) and recent developments in pharmaceuticals to reduce AGE accumulation.**  
Smit AJ, Lutgers HL. Curr Med Chem. 2004 Oct;11(20):2767-84.

## **AGE Reader in cardiovascular disease**

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- 34. Skin autofluorescence as proxy of tissue AGE accumulation is dissociated from SCORE cardiovascular risk score, and remains so after 3 years.**  
Tiessen AH. et al. Clin Chem Lab Med. 2013 Apr 2:1-7.
- 35. Skin Autofluorescence as a Measure of Advanced Glycation End Product Deposition Is Elevated in Peripheral Artery Disease.**  
de Vos L.C. et al. Arterioscler Thromb Vasc Biol. 2012 Nov 8. (Epub)
- 36. Relationship between tissue glycation measured by autofluorescence and pulse wave velocity in young and elderly non-diabetic populations.**  
Watfa G. et al. Diabetes Metab. 2012 Jun 13.
- 37. Advanced glycation end product associated skin autofluorescence: A mirror of vascular function?**  
Hofmann B. et al. Exp Gerontol. 2012 May 12.
- 38. Effects of alagebrium, an advanced glycation endproduct breaker, on exercise tolerance and cardiac function in patients with chronic heart failure.**  
Hartog J.W. et al. BENEFICIAL investigators. Eur J Heart Fail. 2011 Aug;13(8):899-908.
- 39. Skin autofluorescence is increased in patients with carotid artery stenosis and peripheral artery disease.**  
Noordzij MJ. Int J Cardiovasc Imaging. 2011 Feb. Epub
- 40. Carotid artery intima media thickness associates with skin autofluorescence in non-diabetic subjects without clinically manifest cardiovascular disease.**  
Lutgers H. et al. Eur J Clin Invest. 2010 ;40(9):812-7
- 41. Advanced glycation end-products, anti-hypertensive treatment and diastolic function in patients with hypertension and diastolic dysfunction.**  
Hartog J. et al; Eur. Journal of Heart Failure, 2010 Apr;12(4):397-403
- 42. Advanced glycation end products in patients with cerebral infarction.**  
Ohnuki Y. Intern Med. 2009;48(8):587-91.
- 43. Advanced Glycation End Products and their receptor RAGE in systemic autoimmune diseases - an inflammation propagating factor contributing to accelerated atherosclerosis.**  
Nienhuis et al. Autoimmunity, 2009; 42(4): 302-304

44. **Skin autofluorescence is elevated in acute myocardial infarction and is associated with the one-year incidence of major adverse cardiac events**  
Mulder D. et al, Netherlands Heart Journal, Volume 17, Number 4, April 2009
45. **Relation between food and drinking habits, and skin autofluorescence and intima media thickness in subjects at high cardiovascular risk**  
Jochemsen M. et al: Journal of Food and Nutrition Research Vol. 48, 2009, No. 1, pp. 51–58
46. **Advanced Glycation Endproducts (AGE) in chronic heart failure**  
Smit A. et al. Annals of New York Academy of Science 2008; 1126:225-30
47. **Clinical relevance of Advanced Glycation Endproducts for vascular surgery**  
Meerwaldt R. et al. Eur J Vasc Endovasc Surg. 2008; 38,125-131
48. **Skin autofluorescence is elevated in patients with stable coronary artery disease and is associated with serum levels of neopterin and the soluble receptor for advanced glycation end products.**  
Mulder DJ. et al. Atherosclerosis. 2007;197:217-223
49. **Clinical and prognostic value of Advanced Glycation End-products (AGEs) in chronic heart failure.**  
Hartog J. et al Eur J Heart Failure 2007;9:1146-55
50. **Skin Autofluorescence is an independent marker for Acute Myocardial Infarction**  
Mulder DJ, et al. Circulation: 2005; 112:II-371.

## AGE Reader in renal disease

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51. **Skin and Plasma Autofluorescence During Hemodialysis: A Pilot Study.**  
Graaff R. et al. Artif Organs. 2013 Oct 29.
52. **Tissue Advanced Glycation End Product Deposition after Kidney Transplantation.**  
Crowley LE et al. Nephron Clin Pract. 2013 Oct 15;124(1-2):54-59.
53. **Advanced glycation end-products and skin autofluorescence in end-stage renal disease: a review.**  
Arsov S. et al. Clin Chem Lab Med. 2013 Apr 4:1-10.
54. **Accumulation of tissue advanced glycation end products correlated with glucose exposure dose and associated with cardiovascular morbidity in patients on peritoneal dialysis.**  
Jiang J. et al. Atherosclerosis. 2012 Sep;224(1):187-94.
55. **Skin autofluorescence as a marker of cardiovascular risk in children with chronic kidney disease.**  
Makulska I. et al. Pediatr Nephrol. 2012 Sep 15. (Epub)
56. **Factors influencing skin autofluorescence of patients with peritoneal dialysis.**  
Mácsai E. et al. Acta Physiol Hung. 2012 Jun;99(2):216-22.
57. **Decreased serum carnitine is independently correlated with increased tissue accumulation levels of advanced glycation end products in hemodialysis patients.**  
Adachi T. et al. Nephrology (Carlton). 2012 Jul 13. doi: 10.1111/j.1440-1797.2012.01642.x.
58. **Skin Autofluorescence: A Pronounced Marker of Mortality in Hemodialysis Patients.**  
Gerrits E. et al. Nephron Extra. 2012 Jan;2(1):184-191.
59. **Advanced oxidation protein products and advanced glycation end products in children and adolescents with chronic renal insufficiency.**  
Sebeková K. J Ren Nutr. 2012 Jan;22(1):143-8.
60. **Evaluation of advanced glycation end products accumulation, using skin autofluorescence, in CKD and dialysis patients.** Oleniuc M. et al. Int Urol Nephrol. 2011 Oct;44(5):1441-9.
61. **Skin autofluorescence and the association with renal and cardiovascular risk factors in chronic kidney disease stage 3.**  
McIntyre N.J. et al. Clin J Am Soc Nephrol. 2011 Oct;6(10):2356-63.

- 62. Tissue level of advanced glycation end products is an independent determinant of high-sensitivity C-reactive protein levels in haemodialysis patients.**  
Nagano M. et al. *Nephrology* (Carlton). 2011 Mar;16(3):299-303
- 63. Skin autofluorescence as a measure of advanced glycation endproduct deposition: a novel risk marker in chronic kidney disease.**  
Smit AJ. et al. *Curr Opin Nephrol Hypertens*, 2010; 19(6):527-33.
- 64. Skin autofluorescence is associated with renal function and cardiovascular diseases in pre-dialysis chronic kidney disease patients.**  
Tanaka K. et al. *Nephrol Dial Transplant*. doi: 10.1093/ndt/gfq369
- 65. Advanced glycation end products, carotid atherosclerosis, and circulating endothelial progenitor cells in patients with end-stage renal disease.**  
Ueno H et al. *Metabolism*, 2010, doi: 10.1016/j.metabol.2010.04.001
- 66. Tissue-Advanced Glycation End Product Concentration in Dialysis Patients**  
McIntyre et al; *CJASN*, 2010; 5(1): 51-55
- 67. Does hepatitis C increase the accumulation of advanced glycation end products in haemodialysis patients?**  
Arsov S. et al. *Nephrol Dial Transplant* 2009; 25(3): 885-891
- 68. Skin-Autofluorescence Is an Independent Predictor of Graft Loss in Renal Transplant Recipients**  
Hartog J. et al, *Transplantation* • Volume 87, Number 7, April 15, 2009
- 69. Advanced Glycation End Products in Renal Failure: An Overview**  
Noordzij M. et al, *Journal of Renal Care* 2008
- 70. AGEs, autofluorescence and renal failure**  
Gerrits E. et al. *Nephrology Dialysis and Transplantation* November 25, 2008
- 71. Skin autofluorescence, a marker for advanced glycation end product accumulation, is associated with arterial stiffness in patients with end-stage renal disease**  
Ueno H. et al: *Metabolism Clinical and Experimental* 57 (2008) 1452–1457
- 72. Skin Autofluorescence, a measure of tissue advanced glycation endproducts (AGEs), is related to the diastolic function of dialysis patients**  
Hartog J. et al. *Journal of Cardiac Failure*. 2008; 14(7): 596-602
- 73. Risk factors for chronic transplant dysfunction and cardiovascular disease are related to accumulation of advanced glycation end-products in renal transplant recipients**  
Hartog JW, et al. *Nephrol Dial Transpl* 2006 Aug;21(8):2263-9
- 74. Skin autofluorescence, a measure of cumulative metabolic stress and advanced glycation endproducts, predicts mortality in hemodialysis patients**  
Meerwaldt R, et al. *J Am Soc Nephrol* 2005;16:3687-93.
- 75. Skin autofluorescence, a noninvasive measure of advanced glycation end product accumulation, is a predictor of mortality in hemodialysis patients**  
Meerwaldt R, et al. *Ann N Y Acad Sci* 2005;1043:911.
- 76. Accumulation of advanced glycation end products, measured as skin autofluorescence, in renal disease.**  
Hartog JW. et al. *Ann N Y Acad Sci*. 2005 Jun;1043:299-307.
- 77. Advanced glycation endproducts in kidney transplant patients: a putative role in the development of chronic renal transplant dysfunction**  
Hartog J. et al. *Am J Kidn Dis* 2004; 43:966-975

## AGE Reader in other diseases

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- 78. Plasma AGEs and skin autofluorescence are increased in COPD.**  
Gopal P. et al. Eur Respir J. 2013 May 3. [Epub ahead of print]
- 79. Increased advanced glycation end-products (AGEs) assessed by skin autofluorescence in schizophrenia.**  
Kouidrat Y. et al. J Psychiatr Res. 2013 Apr 21.
- 80. Local differences in skin autofluorescence may not reflect similar differences in oxidative stress exposure.**  
Hetteema M. et al. J Rheumatol. 2013 Feb;40(2):206.
- 81. Vascular Aspects of Fabry Disease in Relation to Clinical Manifestations and Elevations in Plasma Globotriaosylsphingosine.**  
Rombach S.M. et al. Hypertension. 2012 Aug 6. (Epub)
- 82. Advanced Glycation Endproducts are increased in RA patients with controlled disease.**  
de Groot L. et al. Arthritis Res Ther. 2011 Dec 14;13(6):R205.
- 83. Increased skin autofluorescence after colorectal operation reflects surgical stress and postoperative outcome.**  
Pol H.W. et al. Am J Surg. 2011 Nov;202(5):583-9.
- 84. Skin autofluorescence, as marker of accumulation of advanced glycation endproducts and of cumulative metabolic stress, is not increased in patients with systemic sclerosis.**  
Hetteema M.E. et al. Int J Rheumatol. 2011. Epub
- 85. Skin advanced glycation end-product accumulation is negatively associated with calcaneal osteo-sono assessment index among non-diabetic adult Japanese men.**  
Momma H. Osteoporos Int. 2011 Sep 8. Epub
- 86. Skin autofluorescence is high in patients with cirrhosis - further arguing for the implication of Advanced Glycation End products.**  
Maury E. et al. J Hepatol. 2011 May;54(5):1079-80.
- 87. Skin advanced glycation end product accumulation and muscle strength among adult men.**  
Momma H. et al; Eur J Appl Physiol. 2010 (Epub)
- 88. Skin Autofluorescence as Marker of Tissue Advanced Glycation End-Products Accumulation in Formerly Preeclamptic Women.**  
Coffeng S.M. et al. Hypertens Pregnancy; 2010, Epub
- 89. Accumulation of advanced glycation end (AGEs) products in intensive care patients: an observational, prospective study.**  
Greven W. et al. BMC Clinical Pathology; 2010: 10 (4)
- 90. Increased accumulation of advanced glycation endproducts in patients with Wegener's granulomatosis.**  
Leeuw de K et al. Ann Rheum Dis. 2009; 69(3): 625-U191
- 91. Skin autofluorescence is increased in systemic lupus erythematosus but not reflected by plasma levels advanced glycation endproducts**  
Nienhuis H. et al: Rheumatology. 2008; 47(10): 1554-1558
- 92. Skin autofluorescence is increased in systemic lupus erythematosus but not reflected by plasma levels of advanced glycation endproducts**  
Nienhuis H. et al. Rheumatology; 2008; 47(10): 1554-1558
- 93. Advanced glycation end products and the absence of premature atherosclerosis in glycogen storage disease Ia**  
den Hollander NC. et al. J Inherit Metab Dis. 2007. epub ahead of print
- 94. Accumulation of advanced glycation endproducts in patients with systemic lupus erythematosus.**  
de Leeuw K. et al. Rheumatol 2007;45:1551-1556.
- 95. Skin autofluorescence, a marker of advanced glycation end products and oxidative stress, is increased in recently preclamptic women**  
Blaauw J. et al. Am J Obstet Gynecol. 2006 Sep;195(3):717-22.



96. **Enhanced skin autofluorescence as a marker for oxidative stress in sepsis, a pilot study.**  
Mulder DJ, et al. Eur Soc Intensive Care Medicine 2004

## **AGE Reader (technical) validation**

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97. **Reference values of skin autofluorescence as an estimation of tissue accumulation of advanced glycation end products in a general Slovak population.**  
Klenovics KS, Diabet Med. 2013 Sep 30. doi: 10.1111/dme.12326. (Epub).
98. **Reference values for the Chinese population of skin autofluorescence as a marker of advanced glycation end products accumulated in tissue.**  
Yue X. et al. Diabet Med. 2011 Jul;28(7):818-23.
99. **Dermal factors influencing measurement of skin autofluorescence.**  
Noordzij M.J. et al. Diabetes Technol Ther. 2011 Feb;13(2):165-70
100. **Skin color independent assessment of aging using skin autofluorescence**  
Koetsier M. et al. Optics Express, 2010 ;18(14):14416-29
101. **Reference Values of Skin Autofluorescence.**  
Koetsier M. et al. Diabetes Technology & Therapeutics 2010; 12(5):399-403
102. **Skin autofluorescence for the risk assessment of chronic complications in diabetes: a broad excitation range is sufficient**  
Koetsier M. et al: Optics Express. 2009; 17(2): 509-519
103. **Skin autofluorescence increases postprandially in human subjects**  
Stirban A. et al. Diabetes Technology & Therapeutics 2008: 10:200-5
104. **The Effect of Aggressive Versus Conventional Lipid-lowering Therapy on Markers of Inflammatory and Oxidative Stress.**  
Mulder DJ. et al. Cardiovasc Drugs Ther. 2007 Apr;21(2):91-7.
105. **Skin Autofluorescence, a Novel Marker for Glycation and Oxidative Stress derived Advanced Glycation Endproducts. An Overview of Current Clinical Studies, Evidence and Limitations**  
Mulder DJ, et al. Diabetes Technology and Therapeutics 2006; 8:523-535.
106. **Simple noninvasive measurement of skin autofluorescence**  
Meerwaldt R, et al. Ann N Y Acad Sci. 2005;1043:290-298.
107. **Instrumentation for the measurement of Autofluorescence in the human skin**  
Graaff R et al. Proc. of SPIE Vol. 5692 (SPIE, Bellingham, WA, 2005). pp. 111-118.
108. **Simple non-invasive assessment of advanced glycation endproducts accumulation**  
Meerwaldt R et al. Diabetologia 2004; 47:1324-1330
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