



Universiteit
Leiden
The Netherlands

Improving cardiovascular risk assessment in primary care

Boer, A.W. de

Citation

Boer, A. W. de. (2018, March 6). *Improving cardiovascular risk assessment in primary care*. Retrieved from <https://hdl.handle.net/1887/61128>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/61128>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/61128> holds various files of this Leiden University dissertation

Author: Boer, A.W. de

Title: Improving cardiovascular risk assessment in primary care

Date: 2018-03-06

CHAPTER 8

References

References

1. World Health Organization. NCD mortality and morbidity. 2008.
2. Hart- en vaatziekten, cijfers en context. www.volksgezondheidenzorg.info/onderwerp/hart-en-vaatziekten. 2016.
3. Townsend N, Wilson L, Bhatnagar P, Wickramasinghe K, Rayner M, Nichols M. Cardiovascular disease in Europe: epidemiological update 2016. *Eur Heart J*. 2016;37(42):3232-45.
4. Mendis S, Puska P, Norrving B, editors. Global Atlas on Cardiovascular Disease Prevention and Control. Geneva: 2011.
5. Singh RB, Mengi SA, Xu YJ, Arneja AS, Dhalla NS. Pathogenesis of atherosclerosis: A multifactorial process. *Experimental & Clinical Cardiology*. 2002;7(1):40-53.
6. Magnus P, Beaglehole R. The real contribution of the major risk factors to the coronary epidemics: time to end the "only-50%" myth. *Archives of internal medicine*. 2001;161(22):2657-60.
7. Law MR, Wald NJ, Thompson SG. By how much and how quickly does reduction in serum cholesterol concentration lower risk of ischaemic heart disease? *Bmj*. 1994;308(6925):367-72.
8. Etehad D, Emdin CA, Kiran A, Anderson SG, Callender T, Emberson J, et al. Blood pressure lowering for prevention of cardiovascular disease and death: a systematic review and meta-analysis. *Lancet*. 2016;387(10022):957-67.
9. Szuszkejewicz-Garcia MM, Davidson JA. Cardiovascular disease in diabetes mellitus: risk factors and medical therapy. *Endocrinology and metabolism clinics of North America*. 2014;43(1):25-40.
10. Poirier P, Giles TD, Bray GA, Hong Y, Stern JS, Pi-Sunyer FX, et al. Obesity and cardiovascular disease: pathophysiology, evaluation, and effect of weight loss: an update of the 1997 American Heart Association Scientific Statement on Obesity and Heart Disease from the Obesity Committee of the Council on Nutrition, Physical Activity, and Metabolism. *Circulation*. 2006;113(6):898-918.
11. Jha P, Ramasundarahettige C, Landsman V, Rostron B, Thun M, Anderson RN, et al. 21st-century hazards of smoking and benefits of cessation in the United States. *The New England journal of medicine*. 2013;368(4):341-50.
12. Grobbee DE, Hoes AW. Cohort and cross-sectional studies. *Clinical Epidemiology: Principles, methods and applications for clinical research*. Second ed. Burlington: Jones & Bartlett Learning; 2015.
13. Dawber TR, Meadors GF, Moore FE, Jr. Epidemiological approaches to heart disease: the Framingham Study. *American journal of public health and the nation's health*. 1951;41(3):279-81.
14. Kannel WB, Feinleib M, McNamara PM, Garrison RJ, Castelli WP. An investigation of coronary heart disease in families. The Framingham offspring study. *American journal of epidemiology*. 1979;110(3):281-90.
15. Splansky GL, Corey D, Yang Q, Atwood LD, Cupples LA, Benjamin EJ, et al. The Third Generation Cohort of the National Heart, Lung, and Blood Institute's Framingham Heart Study: design, recruitment, and initial examination. *American journal of epidemiology*. 2007;165(11):1328-35.
16. Tsao CW, Vasan RS. Cohort Profile: The Framingham Heart Study (FHS): overview of milestones in cardiovascular epidemiology. *International journal of epidemiology*. 2015;44(6):1800-13.
17. Wilson PW, D'Agostino RB, Levy D, Belanger AM, Silbershatz H, Kannel WB. Prediction of coronary heart disease using risk factor categories. *Circulation*. 1998;97(18):1837-47.
18. D'Agostino RB, Sr., Vasan RS, Pencina MJ, Wolf PA, Cobain M, Massaro JM, et al. General cardiovascular risk profile for use in primary care: the Framingham Heart Study. *Circulation*. 2008;117(6):743-53.
19. Chen Q, Galfalvy H, Duan N. Effects of disease misclassification on exposure-disease association. *American journal of public health*. 2013;103(5):e67-73.

20. Kelley K, Clark B, Brown V, Sitzia J. Good practice in the conduct and reporting of survey research. International journal for quality in health care : journal of the International Society for Quality in Health Care. 2003;15(3):261-6.
21. Wonca International Classification Committee. The international classification of primary care 2013.
22. Resnik DB. Disclosure of individualized research results: a precautionary approach. Accountability in research. 2011;18(6):382-97.
23. Centrale Commissie Mensgebonden Onderzoek. Jaarverslag 2013. Gendt: Rikken Print; 2014.
24. Germino JC, Elmore JG, Carlos RC, Lee CI. Imaging-based screening: maximizing benefits and minimizing harms. ClinImaging. 2015.
25. Wolf SM, Lawrence FP, Nelson CA, Kahn JP, Cho MK, Clayton EW, et al. Managing incidental findings in human subjects research: analysis and recommendations. JLaw MedEthics. 2008;36(2):219-48, 1.
26. van Dis I, Geleijnse JM, Verschuren WM, Kromhout D. Cardiovascular risk management of hypertension and hypercholesterolaemia in the Netherlands: from unifactorial to multifactorial approach. Netherlands heart journal : monthly journal of the Netherlands Society of Cardiology and the Netherlands Heart Foundation. 2012;20(7-8):320-5.
27. Pyorala K, De Backer G, Graham I, Poole-Wilson P, Wood D. Prevention of coronary heart disease in clinical practice. Recommendations of the Task Force of the European Society of Cardiology, European Atherosclerosis Society and European Society of Hypertension. Eur Heart J. 1994;15(10):1300-31.
28. Cooney MT, Dudina A, D'Agostino R, Graham IM. Cardiovascular risk-estimation systems in primary prevention: do they differ? Do they make a difference? Can we see the future? Circulation. 2010;122(3):300-10.
29. Kwaliteitsinstituut voor de Gezondheidszorg CBO en Nederlands Huisartsen Genootschap. Multidisciplinaire richtlijn Cardiovasculair risicomanagement 2006. 2006.
30. Nederlands Huisartsen Genootschap. Multidisciplinaire richtlijn Cardiovasculair risicomanagement herziening 2011. Houten: Bohn Stafleu van Loghum; 2011.
31. Nichols M, Townsend N, Scarborough P, Rayner M. Trends in age-specific coronary heart disease mortality in the European Union over three decades: 1980-2009. Eur Heart J. 2013;34(39):3017-27.
32. Di Cesare M, Bennett JE, Best N, Stevens GA, Danaei G, Ezzati M. The contributions of risk factor trends to cardiometabolic mortality decline in 26 industrialized countries. International journal of epidemiology. 2013;42(3):838-48.
33. Hobbs FDR. Cardiovascular disease: different strategies for primary and secondary prevention? Heart. 2004;90(10):1217-23.
34. World Health Organization. Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva: 2013.
35. Schuster RJ, Steichen O, Ogunmoroti O, Ellison S, Terwoerd N, Duhot D, et al. Physician cardiovascular disease risk factor management: practices in France vs the United States. JClinHypertens(Greenwich). 2011;13(1):10-8.
36. Tiessen AH, Smit AJ, Broer J, Groenier KH, van der Meer K. Randomized controlled trial on cardiovascular risk management by practice nurses supported by self-monitoring in primary care. BMCFam Pract. 2012;13:90.
37. Effectiveness of health checks conducted by nurses in primary care: results of the OXCHECK study after one year. Imperial Cancer Research Fund OXCHECK Study Group. Brmj. 1994;308(6924):308-12.
38. Frieden TR, Berwick DM. The "Million Hearts" initiative--preventing heart attacks and strokes. The New England journal of medicine. 2011;365(13):e27.
39. Chang KC, Soljak M, Lee JT, Woringer M, Johnston D, Khunti K, et al. Coverage of a national cardiovascular risk assessment and management programme (NHS Health Check): Retrospective database

- study. *Preventive medicine*. 2015;78:1-8.
40. Assendelft WJ, Nielen MM, Hettinga DM, van der Meer V, van Vliet M, Drenthen AJ, et al. Bridging the gap between public health and primary care in prevention of cardiometabolic diseases; background of and experiences with the Prevention Consultation in The Netherlands. *Fam Pract*. 2012;29 Suppl 1:i126-i31.
 41. Vos HM, Van Delft DH, De Kleijn MJ, Nielen MM, Schellevis FG, Lagro-Janssen AL. Selective prevention of cardiometabolic diseases in general practice: attitudes and working methods of male and female general practitioners before and after the introduction of the Prevention Consultation guideline in the Netherlands. *JEvalClinPract*. 2014;20(4):478-85.
 42. Nielen MM, Assendelft WJ, Drenthen AJ, van den Hombergh P, van Dis I, Schellevis FG. Primary prevention of cardio-metabolic diseases in general practice: a Dutch survey of attitudes and working methods of general practitioners. *The European journal of general practice*. 2010;16(3):139-42.
 43. Ayorinde AA, Porteous T, Sharma P. Screening for major diseases in community pharmacies: a systematic review. *IntJPharmPract*. 2013;21(6):349-61.
 44. Tan N, Taylor DM. Feasibility and outcomes of screening for cardiovascular risk factors in the emergency department. *EmergMedAustralas*. 2013;25(2):175-81.
 45. Milani RV, Lavie CJ. Impact of worksite wellness intervention on cardiac risk factors and one-year health care costs. *AmJCardiol*. 2009;104(10):1389-92.
 46. Younossi ZM, Koenig AB, Abdelatif D, Fazel Y, Henry L, Wymer M. Global epidemiology of nonalcoholic fatty liver disease-Meta-analytic assessment of prevalence, incidence, and outcomes. *Hepatology* (Baltimore, Md). 2016;64(1):73-84.
 47. Mikolasevic I, Milic S, Turk Wensveen T, Grgic I, Jakopcic I, Stimac D, et al. Nonalcoholic fatty liver disease - A multisystem disease? *World journal of gastroenterology*. 2016;22(43):9488-505.
 48. Targher G, Byrne CD, Lonardo A, Zoppini G, Barbui C. Non-alcoholic fatty liver disease and risk of incident cardiovascular disease: A meta-analysis. *Journal of hepatology*. 2016;65(3):589-600.
 49. Wannamethee SG, Lennon L, Shaper AG. The value of gamma-glutamyltransferase in cardiovascular risk prediction in men without diagnosed cardiovascular disease or diabetes. *Atherosclerosis*. 2008;201(1):168-75.
 50. Kunutsor SK, Bakker SJ, Kootstra-Ros JE, Gansevoort RT, Dullaart RP. Circulating gamma glutamyltransferase and prediction of cardiovascular disease. *Atherosclerosis*. 2015;238(2):356-64.
 51. Weng SF, Kai J, Guha IN, Qureshi N. The value of aspartate aminotransferase and alanine aminotransferase in cardiovascular disease risk assessment. *Open heart*. 2015;2(1):e000272.
 52. de Mutsert R, den Heijer M, Rabelink TJ, Smit JW, Romijn JA, Jukema JW, et al. The Netherlands Epidemiology of Obesity (NEO) study: study design and data collection. *European journal of epidemiology*. 2013;28(6):513-23.
 53. Beulens JW, Monninkhof EM, Verschuren WM, van der Schouw YT, Smit J, Ocke MC, et al. Cohort profile: the EPIC-NL study. *International journal of epidemiology*. 2010;39(5):1170-8.
 54. Manson JE, Colditz GA, Stampfer MJ, Willett WC, Krolewski AS, Rosner B, et al. A prospective study of maturity-onset diabetes mellitus and risk of coronary heart disease and stroke in women. *Archives of internal medicine*. 1991;151(6):1141-7.
 55. Margolis KL, Lihong Q, Brzyski R, Bonds DE, Howard BV, Kempainen S, et al. Validity of diabetes self-reports in the Women's Health Initiative: comparison with medication inventories and fasting glucose measurements. *Clinical trials (London, England)*. 2008;5(3):240-7.
 56. Sluijs I, van der AD, Beulens JW, Spijkerman AM, Ros MM, Grobbee DE, et al. Ascertainment and verification of diabetes in the EPIC-NL study. *NethJMed*. 2010;68(1):333-9.
 57. Ngo DL, Marshall LM, Howard RN, Woodward JA, Southwick K, Hedberg K. Agreement between

- self-reported information and medical claims data on diagnosed diabetes in Oregon's Medicaid population. J Public Health Manag Pract. 2003;9(6):542-4.
- 58. Okura Y, Urban LH, Mahoney DW, Jacobsen SJ, Rodeheffer RJ. Agreement between self-report questionnaires and medical record data was substantial for diabetes, hypertension, myocardial infarction and stroke but not for heart failure. J Clin Epidemiol. 2004;57(10):1096-103.
 - 59. Robinson JR, Young TK, Roos LL, Gelskey DE. Estimating the burden of disease. Comparing administrative data and self-reports. Med Care. 1997;35(9):932-47.
 - 60. Simpson CF, Boyd CM, Carlson MC, Griswold ME, Guralnik JM, Fried LP. Agreement between self-report of disease diagnoses and medical record validation in disabled older women: factors that modify agreement. J Am Geriatr Soc. 2004;52(1):123-7.
 - 61. Skinner KM, Miller DR, Lincoln E, Lee A, Kazis LE. Concordance between respondent self-reports and medical records for chronic conditions: experience from the Veterans Health Study. J Ambul Care Manage. 2005;28(2):102-10.
 - 62. Krieger DM, Penninx BW, van Eijk JT, Boeke AJ, Deeg DJ. Self-reports and general practitioner information on the presence of chronic diseases in community dwelling elderly. A study on the accuracy of patients' self-reports and on determinants of inaccuracy. Journal of clinical epidemiology. 1996;49(12):1407-17.
 - 63. Galenkamp H, Huisman M, Braam AW, Schellevis FG, Deeg DJ. Disease prevalence based on older people's self-reports increased, but patient-general practitioner agreement remained stable, 1992-2009. Journal of clinical epidemiology. 2014;67(7):773-80.
 - 64. Poortvliet MC, Lamkaddem M, Devillé W. Niet op naam ingeschreven (NONI) bij de huisarts, Inventarisatie en gevolgen voor de ziekenfondsverzekerden. Utrecht: 2005.
 - 65. Dijkstra R. Mijn HIS is het best! <https://wwwnhgorg/actueel/columns/mijn-his-het-best> 2015.
 - 66. WHO Collaborating Centre for Drug Statistics Methodology. Anatomical Therapeutic Chemical (ATC) classification system. http://wwwwhoccno/atc/structure_and_principles/ 2013.
 - 67. Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics. 1977;33(1):159-74.
 - 68. NCD Risk Factor Collaboration (NCD-RisC). Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. Lancet. 2016;387(10027):1513-30.
 - 69. World Health Organization. Global report on diabetes. Geneva: 2016.
 - 70. Harris MI, Klein R, Welborn TA, Knuiman MW. Onset of NIDDM occurs at least 4-7 yr before clinical diagnosis. Diabetes Care. 1992;15(7):815-9.
 - 71. Rijksinstituut voor Volksgezondheid en Milieu. Diabetes mellitus, cijfers en context 2017 Available from: <https://www.volksgezondheidenzorg.info/onderwerp/diabetes-mellitus>.
 - 72. Maahs DM, West NA, Lawrence JM, Mayer-Davis EJ. Epidemiology of type 1 diabetes. Endocrinology and metabolism clinics of North America. 2010;39(3):481-97.
 - 73. Kristman V, Manno M, Cote P. Loss to follow-up in cohort studies: how much is too much? European journal of epidemiology. 2004;19(8):751-60.
 - 74. de Groot V, Beckerman H, Lankhorst GJ, Bouter LM. How to measure comorbidity. a critical review of available methods. Journal of clinical epidemiology. 2003;56(3):221-9.
 - 75. de Lusignan S, van Weel C. The use of routinely collected computer data for research in primary care: opportunities and challenges. Fam Pract. 2006;23(2):253-63.
 - 76. Cole AM, Stephens KA, Keppel GA, Lin CP, Baldwin LM. Implementation of a health data-sharing infrastructure across diverse primary care organizations. The Journal of ambulatory care management. 2014;37(2):164-70.
 - 77. Morris Z, Whiteley WN, Longstreth WT, Jr., Weber F, Lee YC, Tsushima Y, et al. Incidental findings on

- brain magnetic resonance imaging: systematic review and meta-analysis. *Bmj.* 2009;339:b3016.
78. Hegenscheid K, Seipel R, Schmidt CO, Volzke H, Kuhn JP, Biffl R, et al. Potentially relevant incidental findings on research whole-body MRI in the general adult population: frequencies and management. *EurRadiol.* 2013;23(3):816-26.
79. Wardlaw JM, Davies H, Booth TC, Laurie G, Compston A, Freeman C, et al. Acting on incidental findings in research imaging. *BMJ.* 2015;351:h5190.
80. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care : journal of the International Society for Quality in Health Care.* 2007;19(6):349-57.
81. Kitzinger J. Qualitative research. Introducing focus groups. *BMJ.* 1995;311(7000):299-302.
82. Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *Bmj.* 2000;320(7227):114-6.
83. Charmaz K. Constructing grounded theory: A practical guide through qualitative analysis. Thousand Oaks, CA: SAGE Publications; 2006 2006.
84. Flory J, Emanuel E. Interventions to improve research participants' understanding in informed consent for research: a systematic review. *JAMA.* 2004;292(13):1593-601.
85. Kirschen MP, Jaworska A, Illes J. Subjects' expectations in neuroimaging research. *JMagn ResonImaging.* 2006;23(2):205-9.
86. Daack-Hirsch S, Driessnack M, Hanish A, Johnson VA, Shah LL, Simon CM, et al. 'Information is information': a public perspective on incidental findings in clinical and research genome-based testing. *ClinGenet.* 2013;84(1):11-8.
87. Zafar HM, Bugos EK, Langlotz CP, Frasso R. "Chasing a Ghost": Factors that Influence Primary Care Physicians to Follow Up on Incidental Imaging Findings. *Radiology.* 2016;281(2):567-73.
88. Cole C, Petree LE, Phillips JP, Shoemaker JM, Holdsworth M, Helitzer DL. 'Ethical responsibility' or 'a whole can of worms': differences in opinion on incidental finding review and disclosure in neuroimaging research from focus group discussions with participants, parents, IRB members, investigators, physicians and community members. *JMedEthics.* 2015;41(10):841-7.
89. Ransohoff DF, McNaughton Collins M, Fowler FJ. Why is prostate cancer screening so common when the evidence is so uncertain? A system without negative feedback. *The American journal of medicine.* 2002;113(8):663-7.
90. Zannad F, Dallongeville J, Macfadyen RJ, Ruilope LM, Wilhelmsen L, De BG, et al. Prevention of cardiovascular disease guided by total risk estimations--challenges and opportunities for practical implementation: highlights of a CardioVascular Clinical Trialists (CVCT) Workshop of the ESC Working Group on CardioVascular Pharmacology and Drug Therapy. *EurJPrevCardiol.* 2012;19(6):1454-64.
91. Panteia. Effecten van preventief zelfonderzoek op zorgkosten. Zoetermeer2014.
92. Ickenroth MH, Ronda G, Grispen JE, Dinant GJ, de Vries NK, van der Weijden T. How do people respond to self-test results? A cross-sectional survey. *BMCFam Pract.* 2010;11:77.
93. Ickenroth MH, Grispen JE, Ronda G, Tacken M, Dinant GJ, de Vries NK, et al. Motivation and experiences of self-testers regarding tests for cardiovascular risk factors. *Health Expect.* 2011.
94. Nielsen MM, Schellevis FG, Verheij RA. The usefulness of a free self-test for screening albuminuria in the general population: a cross-sectional survey. *BMCPublic Health.* 2009;9:381.
95. Blackburn H. Classification of the electrocardiogram for population studies: Minnesota Code. *JElec-trocardiol.* 1969;2(3):305-10.
96. Friedewald WT, Levy RL, Fredrickson DS. Estimation of the concentration of low-density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. *ClinChem.* 1972;18(6):499-502.
97. Levey AS, Bosch JP, Lewis JB, Greene T, Rogers N, Roth D. A more accurate method to estimate

- glomerular filtration rate from serum creatinine: a new prediction equation. Modification of Diet in Renal Disease Study Group. *AnnInternMed.* 1999;130(6):461-70.
98. World Health Organization. Definition and diagnosis of diabetes mellitus and intermediate hyperglycaemia. 2006.
99. Rothman KJ. Standardization. *Epidemiology: An Introduction*: Oxford University Press; 2002. p. 158-62.
100. S.Lumley T. Simple and Stratified sampling. *Complex Surveys: A Guide to Analysis Using R*. 1 ed2013. p. 17-35.
101. Ministerie van volksgezonheid welzijn en sport. Nederland de maat genomen, hoeveel mensen hebben overgewicht? 2013.
102. de Boer AW, de Mutsert R, den Heijer M, Jukema JW, Rosendaal FR, Blom JW, et al. Overweight can be used as a tool to guide case-finding for cardiovascular risk assessment. *Fam Pract.* 2015;32(6):646-51.
103. American Diabetes Association. Standards of medical care in diabetes-2012. *Diabetes care.* 2012;35 Suppl 1:S11-S63.
104. Rutten GEHM, De Grauw WJC, Nijpels G, Goudswaard AN, Uitewaal PJM, Van der Does FEE, et al. NHG-standaard diabetes mellitus type 2 (tweede herziening). *Huisarts Wet.* 2006;49(3):137-52.
105. Wendel-Vos GC, Schuit AJ, Saris WH, Kromhout D. Reproducibility and relative validity of the short questionnaire to assess health-enhancing physical activity. *JClinEpidemiol.* 2003;56(12):1163-9.
106. World Health Organization. Global database on Body Mass Index. 2005.
107. World Health Organization. Waist Circumference and Waist-hip Ratio: Report of a WHO Expert Consultation, Geneva, 8-11 December 2008: World Health Organization; 2011 2011.
108. Chamnan P, Simmons RK, Khaw KT, Wareham NJ, Griffin SJ. Estimating the population impact of screening strategies for identifying and treating people at high risk of cardiovascular disease: modelling study. *BMJ.* 2010;340:c1693.
109. Centraal Bureau voor de Statistiek. Trendcijfers Gezondheidsenquete 1981-2009, gebruik geneeskundige voorzieningen, gezondheidsindicatoren en leefstijl. 2013.
110. van Steenkiste B, Knevel MF, van den Akker M, Metsemakers JF. Increased attendance rate: BMI matters, lifestyles don't. Results from the Dutch SMILE study. *Fam Pract.* 2010;27(6):632-7.
111. Caccamese SM, Kolodner K, Wright SM. Comparing patient and physician perception of weight status with body mass index. *AmJMed.* 2002;112(8):662-6.
112. Liu H, Lu HY. Nonalcoholic fatty liver disease and cardiovascular disease. *World journal of gastroenterology.* 2014;20(26):8407-15.
113. Lee SS, Park SH. Radiologic evaluation of nonalcoholic fatty liver disease. *World journal of gastroenterology.* 2014;20(23):7392-402.
114. van der A DL, Grobbee DE, Roest M, Marx JJ, Voorbij HA, van der Schouw YT. Serum ferritin is a risk factor for stroke in postmenopausal women. *Stroke.* 2005;36(8):1637-41.
115. van der A DL, Marx JJ, Grobbee DE, Kamphuis MH, Georgiou NA, van Kats-Renaud JH, et al. Non-transferrin-bound iron and risk of coronary heart disease in postmenopausal women. *Circulation.* 2006;113(16):1942-9.
116. Bedogni G, Bellentani S, Miglioli L, Masutti F, Passalacqua M, Castiglione A, et al. The Fatty Liver Index: a simple and accurate predictor of hepatic steatosis in the general population. *BMC gastroenterology.* 2006;6:33.
117. Papagianni M, Sofogianni A, Tziomalos K. Non-invasive methods for the diagnosis of nonalcoholic fatty liver disease. *World journal of hepatology.* 2015;7(4):638-48.
118. Hall P, Cash J. What is the Real Function of the Liver 'Function' Tests? *The Ulster Medical Journal.* 2012;81(1):30-6.
119. Herings RM, Bakker A, Stricker BH, Nap G. Pharmaco-morbidity linkage: a feasibility study comparing

- morbidity in two pharmacy based exposure cohorts. *Journal of epidemiology and community health.* 1992;46(2):136-40.
120. D'Agostino RB, Sr., Pencina MJ, Massaro JM, Coady S. Cardiovascular Disease Risk Assessment: Insights from Framingham. *Global heart.* 2013;8(1):11-23.
121. Klein J, van Houwelingen H, Ibrahim J, Scheike T. *Handbook of survival analysis.* Boca Raton: CRC Press; 2013.
122. Pencina MJ, D'Agostino RB, Sr., D'Agostino RB, Jr., Vasan RS. Evaluating the added predictive ability of a new marker: from area under the ROC curve to reclassification and beyond. *Statistics in medicine.* 2008;27(2):157-72; discussion 207-12.
123. 2013 ACC/AHA Guideline on the Assessment of Cardiovascular. *J Am Coll Cardiol.* 2014;63(25 0 0):2935-59.
124. Hu KC, Wang HY, Liu SC, Liu CC, Hung CL, Bair MJ, et al. Nonalcoholic fatty liver disease: updates in noninvasive diagnosis and correlation with cardiovascular disease. *World journal of gastroenterology.* 2014;20(24):7718-29.
125. Chin JL, Pavlides M, Moolla A, Ryan JD. Non-invasive Markers of Liver Fibrosis: Adjuncts or Alternatives to Liver Biopsy? *Frontiers in pharmacology.* 2016;7:159.
126. Goh LG, Dhaliwal SS, Lee AH, Bertolatti D, Della PR. Utility of established cardiovascular disease risk score models for the 10-year prediction of disease outcomes in women. *Expert review of cardiovascular therapy.* 2013;11(4):425-35.
127. Kroneman M, Boerma W, van den Berg M, Groenewegen P, de Jong J, van Ginneken E. The Netherlands: health system review. *Health Systems in Transition.* 2016;18(2):1–239.
128. Schäfer WLA, Van den Berg MJ, Boerma WGW, Schellevis FG, Groenewegen PP. Taakprofielen van huisartsen in Nederland en Europa. *Huisarts Wet.* 2016;59(7):286-91.
129. Yusuf S, Reddy S, Ounpuu S, Anand S. Global burden of cardiovascular diseases: Part II: variations in cardiovascular disease by specific ethnic groups and geographic regions and prevention strategies. *Circulation.* 2001;104(23):2855-64.
130. D'Agostino RB, Sr., Grundy S, Sullivan LM, Wilson P. Validation of the Framingham coronary heart disease prediction scores: results of a multiple ethnic groups investigation. *Jama.* 2001;286(2):180-7.
131. Ederer F, Church TR, Mandel JS. Sample sizes for prevention trials have been too small. *American journal of epidemiology.* 1993;137(7):787-96.
132. Struijk EA, May AM, Beulens JW, van Gils CH, Monninkhof EM, van der Schouw YT, et al. Mortality and cancer incidence in the EPIC-NL cohort: impact of the healthy volunteer effect. *European journal of public health.* 2015;25(1):144-9.
133. Leening MJ, Heeringa J, Deckers JW, Franco OH, Hofman A, Witteman JC, et al. Healthy volunteer effect and cardiovascular risk. *Epidemiology (Cambridge, Mass).* 2014;25(3):470-1.
134. Gordon T, Moore FE, Shurtleff D, Dawber TR. Some methodologic problems in the long-term study of cardiovascular disease: Observations on the Framingham study. *Journal of clinical epidemiology.* 10(3):186-206.
135. Howe CJ, Cole SR, Lau B, Napravnik S, Eron JJ, Jr. Selection Bias Due to Loss to Follow Up in Cohort Studies. *Epidemiology (Cambridge, Mass).* 2016;27(1):91-7.
136. Dettori JR. Loss to follow-up. *Evidence-Based Spine-Care Journal.* 2011;2(1):7-10.
137. Merry AH, Boer JM, Schouten LJ, Feskens EJ, Verschuren WM, Gorgels AP, et al. Validity of coronary heart diseases and heart failure based on hospital discharge and mortality data in the Netherlands using the cardiovascular registry Maastricht cohort study. *European journal of epidemiology.* 2009;24(5):237-47.
138. Houghton C, Casey D, Shaw D, Murphy K. Rigour in qualitative case-study research. *Nurse researcher.*

- 2013;20(4):12-7.
139. Nielen MMJ, Ursum J, Schellevis FG, Korevaar JC. The validity of the diagnosis of inflammatory arthritis in a large population-based primary care database. *BMC Fam Pract.* 2013;14:79.
 140. Coloma PM, Valkhoff VE, Mazzaglia G, Nielsson MS, Pedersen L, Molokhia M, et al. Identification of acute myocardial infarction from electronic healthcare records using different disease coding systems: a validation study in three European countries. *BMJ open.* 2013;3(6).
 141. Sollie A, Sijmons RH, Helsper C, Numans ME. Reusability of coded data in the primary care electronic medical record: A dynamic cohort study concerning cancer diagnoses. *International journal of medical informatics.* 2017;99:45-52.
 142. Khan NF, Harrison SE, Rose PW. Validity of diagnostic coding within the General Practice Research Database: a systematic review. *Br J Gen Pract.* 2010;60(572):e128-36.
 143. Wells BJ, Chagin KM, Nowacki AS, Kattan MW. Strategies for Handling Missing Data in Electronic Health Record Derived Data. *EGEMS (Washington, DC).* 2013;1(3).
 144. Lawrence L, Sincan M, Markello T, Adams DR, Gill F, Godfrey R, et al. The implications of familial incidental findings from exome sequencing: the NIH Undiagnosed Diseases Program experience. *GenetMed.* 2014;16(10):741-50.
 145. Beskow LM, Smolek SJ. Prospective biorepository participants' perspectives on access to research results. *Journal of empirical research on human research ethics : JERHRE.* 2009;4(3):99-111.
 146. Fernandez CV, Gao J, Strahlendorf C, Moghrabi A, Pentz RD, Barfield RC, et al. Providing research results to participants: attitudes and needs of adolescents and parents of children with cancer. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology.* 2009;27(6):878-83.
 147. Partridge AH, Burstein HJ, Gelman RS, Marcom PK, Winer EP. Do patients participating in clinical trials want to know study results? *Journal of the National Cancer Institute.* 2003;95(6):491-2.
 148. Shalowitz DI, Miller FG. Communicating the results of clinical research to participants: attitudes, practices, and future directions. *PLoS medicine.* 2008;5(5):e91.
 149. Broadstock M, Michie S, Marteau T. Psychological consequences of predictive genetic testing: a systematic review. *European journal of human genetics : EJHG.* 2000;8(10):731-8.
 150. Dyakova M, Shantikumar S, Colquitt JL, Drew CM, Sime M, MacIver J, et al. Systematic versus opportunistic risk assessment for the primary prevention of cardiovascular disease. *The Cochrane database of systematic reviews.* 2016(1):Cd010411.
 151. Rippe JM, Angelopoulos TJ. Lifestyle strategies for cardiovascular risk reduction. *Current atherosclerosis reports.* 2014;16(10):444.
 152. Karmali KN, Persell SD, Perel P, Lloyd-Jones DM, Berendsen MA, Huffman MD. Risk scoring for the primary prevention of cardiovascular disease. *The Cochrane database of systematic reviews.* 2017;3:Cd006887.
 153. Badenbroek IF, Stol DM, Nielen MM, Hollander M, Kraaijenhagen RA, de Wit GA, et al. Design of the INTEGRATE study: effectiveness and cost-effectiveness of a cardiometabolic risk assessment and treatment program integrated in primary care. *BMC Fam Pract.* 2014;15:90.
 154. Wang TJ, Gona P, Larson MG, Tofler GH, Levy D, Newton-Cheh C, et al. Multiple biomarkers for the prediction of first major cardiovascular events and death. *The New England journal of medicine.* 2006;355(25):2631-9.
 155. Sniderman AD, Furberg CD. Age as a modifiable risk factor for cardiovascular disease. *Lancet.* 2008;371(9623):1547-9.
 156. Lloyd-Jones DM, Leip EP, Larson MG, D'Agostino RB, Beiser A, Wilson PW, et al. Prediction of lifetime risk for cardiovascular disease by risk factor burden at 50 years of age. *Circulation.* 2006;113(6):791-8.

