



Universiteit  
Leiden  
The Netherlands

## Measuring and improving quality of care in surgical oncology

Wouters, M.W.J.M.

### Citation

Wouters, M. W. J. M. (2013, May 23). *Measuring and improving quality of care in surgical oncology*. Retrieved from <https://hdl.handle.net/1887/20905>

Version: Corrected Publisher's Version

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

Downloaded from: <https://hdl.handle.net/1887/20905>

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

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/20905> holds various files of this Leiden University dissertation.

**Author:** Wouters, M.W.J.M

**Title:** Measuring and improving quality of care in surgical oncology

**Issue Date:** 2013-05-23

Publications of the author



## PUBLICATIONS FROM THIS THESIS

- 1 Effect of hospital volume on postoperative mortality and survival after esophageal and gastric cancer surgery in the Netherlands between 1989 and 2009. Dikken JL, Dassen AE, Lemmens VE, Putter H, Krijnen P, van der Geest L, Bosscha K, Verheij M, van de Velde CJ, **Wouters MW**. *Eur J Cancer*. 2012 May;48(7):1004-13.
- 2 The volume-outcome relation in the surgical treatment of esophageal cancer: A systematic review and meta-analysis. **Wouters MW**, Gooiker GA, van Sandick JW, Tollenaar RA. *Cancer*. 2012 Apr 1; 118(7):1754-63.
- 3 Quality-of-care indicators for esophageal cancer surgery: A review. Courrech Staal EF, **Wouters MW**, Boot H, Tollenaar RA, van Sandick JW. *Eur J Surg Oncol*. 2010 Nov;36(11):1035-43.
- 4 Disparities in quality of care for colon cancer between hospitals in the Netherlands. Elferink MA, **Wouters MW**, Krijnen P, Lemmens VE, Jansen-Landheer ML, van de Velde CJ, Siesling S, Tollenaar RA. *Eur J Surg Oncol*. 2010 Sep;36 Suppl 1:S64-73.
- 5 Variation in treatment and outcome in patients with non-small cell lung cancer by region, hospital type and volume in the Netherlands. **Wouters MW**, Siesling S, Jansen-Landheer ML, Elferink MA, Belderbos J, Coebergh JW, Schramel FM. *Eur J Surg Oncol*. 2010 Sep;36 Suppl 1:S83-92.
- 6 The Quality of Cancer Care initiative in the Netherlands. **Wouters MW**, Jansen-Landheer ML, van de Velde CJ. *Eur J Surg Oncol*. 2010 Sep;36 Suppl 1:S3-S13.
- 7 Volume- or outcome-based referral to improve quality of care for esophageal cancer surgery in The Netherlands. **Wouters MW**, Krijnen P, Le Cessie S, Gooiker GA, Guicherit OR, Marinelli AW, Kievit J, Tollenaar RA. *J Surg Oncol*. 2009 Jun 15;99(8):481-7.
- 8 Centralization of esophageal cancer surgery: does it improve clinical outcome? **Wouters MW**, Karim-Kos HE, le Cessie S, Wijnhoven BP, Stassen LP, Steup WH, Tilanus HW, Tollenaar RA. *Ann Surg Oncol*. 2009 Jul;16(7):1789-98.
- 9 Outcome-based referral to improve quality of care in upper GI surgery. **Wouters M**. *J Surg Oncol*. 2008 Oct 1;98(5):307-8.
- 10 High-volume versus low-volume for esophageal resections for cancer: the essential role of case-mix adjustments based on clinical data. **Wouters MW**, Wijnhoven BP, Karim-Kos HE, Blaauwgeers HG, Stassen LP, Steup WH, Tilanus HW, Tollenaar RA. *Ann Surg Oncol*. 2008 Jan;15(1):80-7.

## OTHER QUALITY OF CARE PUBLICATIONS BY THE AUTHOR

- 11 Hospital Variation in Failure to Rescue after Colorectal Cancer Surgery: Results of the Dutch Surgical Colorectal Audit. Henneman D, Snijders HS, Fiocco M, van Leersum NJ, Kolfschoten NE, Wiggers T, **Wouters MW**, Tollenaar RA. *Ann Surg Oncol*. 2013 Feb 16. [Epub ahead of print]
- 12 Focusing on desired outcomes of care after colon cancer resections; hospital variations in 'textbook outcome'. Kolfschoten NE, Kievit J, Gooiker GA, van Leersum NJ, Snijders HS, Eddes EH, Tollenaar RA, **Wouters MW**, Marang-van de Mheen PJ. *Eur J Surg Oncol*. 2013 Feb;39(2):156-63.
- 13 Nonelective colon cancer resections in elderly patients: results from the dutch surgical colorectal audit. Kolfschoten NE, **Wouters MW**, Gooiker GA, Eddes EH, Kievit J, Tollenaar RA, Marang-van de Mheen PJ; Dutch Surgical Colorectal Audit group. *Dig Surg*. 2012;29(5):412-9.
- 14 Differences in outcomes of oesophageal and gastric cancer surgery across Europe. Dikken JL, van Sandick JW, Allum WH, Johansson J, Jensen LS, Putter H, Coupland VH, **Wouters MW**, Lemmens VE, van de Velde CJ, van der Geest LG, Larsson HJ, Cats A, Verheij M. *Br J Surg*. 2013 Jan;100(1):83-94.
- 15 Quality of Care Indicators for the Surgical Treatment of Gastric Cancer: A Systematic Review. Dikken JL, Stiekema J, van de Velde CJ, Verheij M, Cats A, **Wouters MW**, van Sandick JW. *Ann Surg Oncol*. 2013 Feb;20(2):381-98.
- 16 Increasing prevalence of comorbidity in patients with colorectal cancer in the South of the Netherlands 1995-2010. van Leersum NJ, Janssen-Heijnen ML, **Wouters MW**, Rutten HJ, Coebergh JW, Tollenaar RA, Lemmens VE. *Int J Cancer*. 2013 May 1;132(9):2157-63.
- 17 A clinical audit in a multidisciplinary care path for thoracic surgery: An instrument for continuous quality improvement. Numan RC, Klomp HM, Li W, Buitelaar DR, Burgers JA, Van Sandick JW, **Wouters MW**. *Lung Cancer*. 2012 Dec;78(3):270-5.
- 18 Increased Resection Rates and Survival Among Patients Aged 75 Years and Older with Esophageal Cancer: A Dutch Nationwide Population-Based Study. Faiz Z, Lemmens VE, Siersema PD, Nieuwenhuijzen GA, **Wouters MW**, Rozema T, Coebergh JW, Wijnhoven BP. *World J Surg*. 2012 Dec;36(12):2872-8.
- 19 Meta-analysis of the risk for anastomotic leakage, the postoperative mortality caused by leakage in relation to the overall postoperative mortality. Snijders HS, **Wouters MW**, van Leersum NJ, Kolfschoten NE, Henneman D, de Vries AC, Tollenaar RA, Bonsing BA. *Eur J Surg Oncol*. 2012 Nov;38(11):1013-9.

- 20 Successful and Safe Introduction of Laparoscopic Colorectal Cancer Surgery in Dutch hospitals. Kolfshoten NE, van Leersum NJ, Gooiker GA, Marang van de Mheen PJ, Eddes EH, Kievit J, Brand R, Tanis PJ, Bemelman WA, Tollenaar RA, Meijerink J, **Wouters MW**. *Ann Surg*. 2012 Jul 5. [Epub ahead of print]
- 21 Use of different comorbidity scores for risk-adjustment in the evaluation of quality of colorectal cancer surgery: Does it matter? Dekker JW, Gooiker GA, van der Geest LG, Kolfshoten NE, Struikmans H, Putter H, **Wouters MW**, Tollenaar RA. *Eur J Surg Oncol*. 2012 Nov; 38(11):1071-8.
- 22 The relationship between volume or surgeon specialty and outcome in the surgical treatment of lung cancer: a systematic review and meta-analysis. von Meyenfeldt EM, Gooiker GA, van Gijn W, Post PN, van de Velde CJ, Tollenaar RA, Klomp HM, **Wouters MW**. *J Thorac Oncol*. 2012 Jul;7(7):1170-8.
- 23 Kolfshoten NE, Gooiker GA, Bastiaannet E, van Leersum NJ, van de Velde CJ, Eddes EH, Marang-van de Mheen PJ, Kievit J, van der Harst E, Wiggers T, **Wouters MW**, Tollenaar RA; On behalf of the Dutch Surgical Colorectal Audit group. *BMJ Qual Saf*. 2012 Jun;21(6):481-9.
- 24 Influence of hospital type on outcomes after oesophageal and gastric cancer surgery. Dikken JL, **Wouters MW**, Lemmens VE, Putter H, van der Geest LG, Verheij M, Cats A, van Sandick JW, van de Velde CJ. *Br J Surg*. 2012 Jul;99(7):954-63.
- 25 The EURECCA project: Data items scored by European colorectal cancer audit registries. van Gijn W, van den Broek CB, Mroczkowski P, Dziki A, Romano G, Pavalkis D, **Wouters MW**, Møller B, Wibe A, Pålman L, Harling H, Smith JJ, Penninckx F, Ortiz H, Valentini V, van de Velde CJ. *Eur J Surg Oncol*. 2012 Jun;38(6):467-71.
- 26 Improved guideline compliance after a 3-year audit of multidisciplinary colorectal cancer care in the western part of the Netherlands. van der Geest LG, Krijnen P, **Wouters MW**, Erkelens WG, Marinelli AW, Nortier HJ, Tollenaar RA, Struikmans H; On behalf of the hospitals in the region of the Comprehensive Cancer Centre the Netherlands (CCCNL), Location Leiden. *J Surg Oncol*. 2012 Jul 1;106(1):1-9.
- 27 Progress in Standard of Care Therapy and Modest Survival Benefits in the Treatment of Non-small Cell Lung Cancer Patients in the Netherlands in the Last 20 Years. van der Drift MA, Karim-Kos HE, Siesling S, Groen HJ, **Wouters MW**, Coebergh JW, de Vries E, Janssen-Heijnen ML. *J Thorac Oncol*. 2012 Feb;7(2):291-8.
- 28 'Clinical auditing', a novel tool for quality assessment in surgical oncology. van Leersum NJ, Kolfshoten NE, Klinkenbijn JH, Tollenaar RA, **Wouters MW**. *Ned Tijdschr Geneeskd*. 2011;155(45):A4136. Dutch.

- 29 Survival after treatment for carcinoma invading bladder muscle: a Dutch population-based study on the impact of hospital volume. Goossens-Laan CA, Visser O, Hulshof MC, **Wouters MW**, Bosch JL, Coebergh JW, Kil PJ. *BJU Int.* 2012 Jul; 110(2): 226-32.
- 30 Variation in case-mix between hospitals treating colorectal cancer patients in the Netherlands. Kolfschoten NE, Marang van de Mheen PJ, Gooiker GA, Eddes EH, Kievit J, Tollenaar RA, **Wouters MW**; Dutch Surgical Colorectal Audit group. *Eur J Surg Oncol.* 2011 Nov;37(11):956-63.
- 31 Enhancing the quality of care for patients with breast cancer: seven years of experience with a Dutch auditing system. Veerbeek L, van der Geest L, **Wouters M**, Guicherit O, Does-den Heijer A, Nortier J, Marinelli A, Tollenaar R, Struikmans H. *Eur J Surg Oncol.* 2011 Aug;37(8):714-8.
- 34 Quality Improvement of Pancreatic Surgery by Centralization in the Western Part of the Netherlands. Gooiker GA, van der Geest LG, **Wouters MW**, Vonk M, Karsten TM, Tollenaar RA, Bonsing BA. *Ann Surg Oncol.* 2011 Jul;18(7):1821-9.
- 35 Systematic review and meta-analysis of the volume-outcome relationship in pancreatic surgery. Gooiker GA, van Gijn W, **Wouters MW**, Post PN, van de Velde CJ, Tollenaar RA; on behalf of the Signalling Committee Cancer of the Dutch Cancer Society. *Br J Surg.* 2011 Apr;98(4):485-494
- 36 A Systematic Review and Meta-analysis of the Relationship Between Hospital/Surgeon Volume and Outcome for Radical Cystectomy: An Update for the Ongoing Debate. Goossens-Laan CA, Gooiker GA, van Gijn W, Post PN, Bosch JL, Kil PJ, **Wouters MW**. *Eur Urol.* 2011 May;59(5):775-83.
- 37 A systematic review and meta-analysis of the volume-outcome relationship in the surgical treatment of breast cancer. Are breast cancer patients better off with a high volume provider? Gooiker GA, van Gijn W, Post PN, van de Velde CJ, Tollenaar RA, **Wouters MW**. *Eur J Surg Oncol.* 2010 Sep;36 Suppl 1:S27-35.
- 38 Variation in management of early breast cancer in the Netherlands, 2003-2006. Van Steenberghe LN, van de Poll-Franse LV, **Wouters MW**, Jansen-Landheer ML, Coebergh JW, Struikmans H, Tjan-Heijnen VC, van de Velde CJ. *Eur J Surg Oncol.* 2010 Sep;36 Suppl 1:S36-43.
- 39 Volume and outcome in colorectal cancer surgery. van Gijn W, Gooiker GA, **Wouters MW**, Post PN, Tollenaar RA, van de Velde CJ. *Eur J Surg Oncol.* 2010 Sep;36 Suppl 1:S55-63.
- 40 Variation in treatment and outcome of patients with rectal cancer by region, hospital type and volume in the Netherlands. Elferink MA, Krijnen P, **Wouters MW**, Lemmens VE, Jansen-Landheer ML, van de Velde CJ, Langendijk JA, Marijnen CA, Siesling S, Tollenaar RA. *Eur J Surg Oncol.* 2010 Sep;36 Suppl 1:S74-82.



- 41 Variations in treatment policies and outcome for bladder cancer in the Netherlands. Goossens-Laan CA, Visser O, **Wouters MW**, Jansen-Landheer ML, Coebergh JW, van de Velde CJ, Hulshof MC, Kil PJ. Eur J Surg Oncol. 2010 Sep;36 Suppl 1:S100-7.
- 42 [The quality indicator 'tumour positive surgical margin following breast-conserving surgery' does not provide transparent insight into care] Gooiker GA, Veerbeek L, van der Geest LG, Stijnen T, Dekker JW, Nortier JW, Marinelli AW, Struikmans H, **Wouters MW** and Tollenaar RA. Ned Tijdschr Geneesk. 2010;154:A1142. Dutch.
- 43 [Ketenzorg wordt geketende zorg] **Wouters MW**, Gooiker GA, van der Hoeven JJ, Klinkenbijn JH, Koning CC, Tollenaar RA. Medisch Contact 2009; 64 (26): 1167-70. Dutch.
- 44 Nationwide outcome registrations to improve quality of care in rectal surgery. An initiative of the European Society of Surgical Oncology. van Gijn W, **Wouters MW**, Peeters KC, van de Velde CJ. J Surg Oncol. 2009 Jun 15;99(8): 491-6.
- 45 [EPD: artsen aan zet] Gooiker GA, **Wouters MW**, Eddes EH, Tollenaar RA. Medisch Contact 2009; 64 (4): 165. Dutch.
- 46 [De specialist aan zet] **Wouters MW**, Eddes EH, Busch OR, Meyerink WJ, vd Velde CJ, Tollenaar RA. Medisch Contact 2007; 62 (26): 1134-37. Dutch.
- 47 [Is volume een goede indicator voor kwaliteit?] **Wouters MW**, Akkersdijk WL, Brom HL, Gooszen HG. Nederlands Tijdschrift voor Heelkunde 2007; 16(5): 486-89. Dutch.
- 48 [National Audit Programs] **Wouters MW**, Eddes EH, Busch OR, Meyerink WJ, vd Velde CJ, Tollenaar RA. Nederlands Tijdschrift voor Heelkunde 2007; 16 (5): 480-83. Dutch.
- 49 [Leidt centralisatie tot de gewenste kwaliteit van zorg?] **Wouters MW**, Bijlsma T, Wegdam J. Nederlands Tijdschrift voor Heelkunde, 2006; 15; 3: 62-65. Dutch.
- 50 [De uitkomst telt: volumennormen zijn niet de beste prestatie-indicatoren voor oesofagus-resecties] **Wouters MW**, Stassen LP, Steup WH, Blaauwgeers H, Tollenaar RA. Medisch Contact, 2005; 26: 1117-1120. Dutch.
- 51 [Financial limits to care; a survey among physicians] **Wouters MW**, Timmermans DR, Kievit J. Ned Tijdschr Geneesk. 1997 Jan 25;141(4):206-10. Dutch.

## OTHER PUBLICATIONS BY THE AUTHOR

- 52 Increasing incidence and survival of a rare skin cancer in the Netherlands. A population-based study of 2,220 cases of skin adnexal carcinoma. Stam H, Lohuis PJ, Zupan-Kajcovski B, **Wouters MW**, van der Hage JA, Visser O. *J Surg Oncol*. 2013 Mar 15. [Epub ahead of print]
- 53 Improved identification of peripheral lung tumors by using diffuse reflectance and fluorescence spectroscopy. Spliethoff JW, Evers DJ, Klomp HM, van Sandick JW, **Wouters MW**, Nachabe R, Lucassen GW, Hendriks BH, Wesseling J, Ruers TJ. *Lung Cancer*. 2013 Feb 9. [Epub ahead of print]
- 54 First experiences of photoacoustic imaging for detection of melanoma metastases in resected human lymph nodes. Grootendorst DJ, Jose J, **Wouters MW**, van Boven H, Van der Hage J, Van Leeuwen TG, Steenbergen W, Manohar S, Ruers TJ. *Lasers Surg Med*. 2012 Sep;44(7):541-9.
- 55 Diffuse Reflectance Spectroscopy: A New Guidance Tool for Improvement of Biopsy Procedures in Lung Malignancies. Evers DJ, Nachabé R, Klomp HM, van Sandick JW, **Wouters MW**, Lucassen GW, Hendriks BH, Wesseling J, Ruers TJ. *Clin Lung Cancer*. 2012 Nov;13(6): 424-31.
- 56 Decisive role of SPECT/CT in localization of unusual periscapular sentinel nodes in patients with posterior trunk melanoma: three illustrative cases and a review of the literature. Alvarez Paez AM, Brouwer OR, Veenstra HJ, van der Hage JA, **Wouters M**, Nieweg OE, Valdés-Olmos RA. *Melanoma Res*. 2012 Jun;22(3):278-83.
- 57 Local treatment of pulmonary metastases: from open resection to minimally invasive approach? Less morbidity, comparable local control. von Meyenfeldt EM, **Wouters MW**, Fat NL, Prevo W, Burgers SA, van Sandick JW, Klomp HM. *Surg Endosc*. 2012 Aug;26(8):2312-21.
- 58 Increased incidence and survival for esophageal cancer but not for gastric cardia cancer in the Netherlands. Dikken JL, Lemmens VE, **Wouters MW**, Wijnhoven BP, Siersema PD, Nieuwenhuijzen GA, van Sandick JW, Cats A, Verheij M, Coebergh JW, van de Velde CJ. *Eur J Cancer*. 2012 Jul;48(11):1624-32.
- 59 Initial results of imaging melanoma metastasis in resected human lymph nodes using photoacoustic computed tomography. Jose J, Grootendorst DJ, Vijn TW, **Wouters MW**, van Boven H, van Leeuwen TG, Steenbergen W, Ruers TJ, Manohar S. *J Biomed Opt*. 2011 Nov 1;16(11):119801.

- 60 Local progression after radiofrequency ablation for pulmonary metastases. von Meyenfeldt EM, Prevo W, Peyrot D, Fat NL, Burgers SJ, **Wouters MW**, Klomp HM. *Cancer*. 2011 Aug 15;117(16):3781-7.
- 61 Reproducibility and validation of tumour stroma ratio scoring on esophageal adenocarcinoma biopsies. Courrech Staal EF, Smit VT, van Velthuysen ML, Spitzer-Naaykens JM, **Wouters MW**, Mesker WE, Tollenaar RA, van Sandick JW. *Eur J Cancer*. 2011 Feb;47(3):375-82.
- 62 Sternal resection for sarcoma, recurrent breast cancer, and radiation-induced necrosis. Koppert LB, van Geel AN, Lans TE, van der Pol C, van Coevorden F, **Wouters MW**. *Ann Thorac Surg*. 2010 Oct;90(4):1102-1108.e2.
- 63 Chest Wall Resection for Adult Soft Tissue Sarcomas and Chondrosarcomas: Analysis of Prognostic Factors. van Geel AN, **Wouters MW**, Lans TE, Schmitz PI, Verhoef C. *World J Surg*. 2011 Jan;35(1):63-9.
- 64 Utility of Preoperative 18F-FDG PET/CT and Brain MRI in Melanoma Patients with Palpable Lymph Node Metastases. Aukema TS, Valdés Olmos RA, **Wouters MW**, Klop WM, Kroon BB, Vogel WV, Nieweg OE. *Ann Surg Oncol*. 2010 Oct;17(10):2773-8..
- 65 Utility of FDG PET/CT and brain MRI in melanoma patients with increased serum S-100B level during follow-up. Aukema TS, Olmos RA, Korse CM, Kroon BB, **Wouters MW**, Vogel WV, Bonfrer JM, Nieweg OE. *Ann Surg Oncol*. 2010 Jun;17(6):1657-61.
- 66 The stromal part of adenocarcinomas of the esophagus: does it conceal targets for therapy? Courrech Staal EF, **Wouters MW**, van Sandick JW, Takkenberg MM, Smit VT, Junggeburst JM, Spitzer-Naaykens JM, Karsten T, Hartgrink HH, Mesker WE, Tollenaar RA. *Eur J Cancer*. 2010 Mar;46(4):720-8.
- 67 Reevaluation of the Locoregional Recurrence Rate in Melanoma Patients With a Positive Sentinel Node Compared to Patients With Palpable Nodal Involvement. Veenstra HJ, van der Ploeg IM, **Wouters MW**, Kroon BB, Nieweg OE. *Ann Surg Oncol*. 2010 Feb;17(2):521-6.
- 68 Results of combined modality treatment in patients with non-small-cell lung cancer of the superior sulcus and the rationale for surgical resection. Kappers I, van Sandick JW, Burgers JA, Belderbos JS, **Wouters MW**, van Zandwijk N, Klomp HM. *Eur J Cardiothorac Surg*. 2009 Oct;36(4):741-6.
- 69 Partiele dunnedarmresectie voor metastasen van melanoom. Te Velde EA, **Wouters MW**, Nieweg OE, Haanen JB, Verwaal VJ. *Nederlands Tijdschrift voor Oncologie* 2009; 6 (4): 165-70.
- 70 Complications in wound healing after chest wall resection in cancer patients; a multivariate analysis of 220 patients. Lans TE, van der Pol C, **Wouters MW**, Schmitz PI, van Geel AN. *J Thorac Oncol*. 2009 May;4(5):639-43.

- 71 Chest wall resection for internal mammary lymph node metastases of breast cancer. van Geel AN, **Wouters MW**, van der Pol C, Schmitz PI, Lans T. *Breast*. 2009 Apr;18(2):94-9.
- 72 The yield of SPECT/CT for anatomical lymphatic mapping in patients with melanoma. van der Ploeg IM, Valdés Olmos RA, Kroon BB, **Wouters MW**, van den Brekel MW, Vogel WV, Hoefnagel CA, Nieweg OE. *Ann Surg Oncol*. 2009 Jun;16(6):1537-42.
- 73 Outcome after surgical resections of recurrent chest wall sarcomas. **Wouters MW**, van Geel AN, Nieuwenhuis L, van Tinteren H, Verhoef C, van Coevorden F, Klomp HM. *J Clin Oncol*. 2008 Nov 1;26(31):5113-8.
- 74 Necrotizing pneumonitis caused by postoperative pulmonary torsion. Hennink S, **Wouters MW**, Klomp HM, Baas P. *Interact Cardiovasc Thorac Surg*. 2008 Feb;7(1):144-5.
- 75 Should internal mammary chain (IMC) sentinel node biopsy be performed? Outcome in 90 consecutive non-biopsied patients with a positive IMC scintigraphy. **Wouters MW**, van Geel AN, Menke-Pluijmers M, de Kanter AY, de Bruin HG, Verhoog L, Eggermont AM. *Breast*. 2008 Apr;17(2):152-8.
- 76 5-Year follow-up of sentinel node negative breast cancer patients. de Kanter AY, Menke-Pluymers MM, **Wouters MW**, Burgmans I, van Geel AN, Eggermont AM. *Eur J Surg Oncol*. 2006 Apr;32(3):282-6.