

7.0 Literatur

1. Mori I. Computerized tomographic apparatus utilizing a radiation source. US Patent No 4,630,202, 1986.
2. Kalender WA, Seissler W, Klotz E, Vock P. Spiral volumetric CT with single-breath-hold technique, continuous transport, and continuous scanner rotation. *Radiology* 1990;176(1):181-3.
3. Bluemke D, Fishman E. Spiral CT of the liver. *AJR* 1993;160(4):787-92.
4. Kalender W, Polacin A, Suss C. A comparison of conventional and spiral CT: an experimental study on the detection of spherical lesions. *J Comput Assist Tomogr* 1994;18(2):167-76.
5. Fujita M, Kuroda C, Kumatori T, et al. Comparison between conventional and spiral CT in patients with hypervascular hepatocellular carcinoma. *Eur J Radiol* 1994; 18(2):134-6.
6. Collie D, Wright A, Williams J, Hashemi-Malayeri B, Stevenson A, Turnbull C. Comparison of spiral-acquisition computed tomography and conventional computed tomography in the assessment of pulmonary metastatic disease. *Br J Radiol* 1994; 67(797):436-44.
7. Ney D, Fishman E, Magid D, Robertson D, Kawashima A. Three-dimensional volumetric display of CT data: effect of scan parameters upon image quality. *J Comput Assist Tomogr* 1991;15(5):875-85.
8. Leppek R, Klose K. 3D-Darstellung der Leber. *Radiologe* 1995;35(10):769-77.
9. Cody DD. AAPM/RSNA physics tutorial for residents: topics in CT. Image processing in CT. *Radiographics* 2002;22(5):1255-68.
10. Vining DJ, Shifrin RY, Grishaw EK, Liu K, Choplin RH. Virtual colonoscopy. *Radiology* 1994;1994(P):446.
11. Vining DJ, Shifrin RY, Haponik EF, Liu K, Choplin RH. Virtual bronchoscopy. *Radiology* 1994;1994(P):261.
12. Rogalla P, Terwisscha van Scheltinga J, Hamm B. Virtual endoscopy and related 3D techniques. Berlin Heidelberg New York: Springer; 2000.
13. Seemann M, Heuschmid M, Vollmar J, et al. Virtual bronchoscopy: comparison of different surface rendering models. *Technol Cancer Res Treat* 2003;2(3):273-9.
14. Kuszyk B, Fishman E. Technical aspects of CT angiography. *Semin Ultrasound CT MR* 1998;19(5):383-93.
15. Salgado R, Mulkens T, Ozsarlar O, De SA, Parizel P. CT angiography: basic principles and post-processing applications. *JBR-BTR* 2003;86(6):336-40.
16. Hong K, Freeny P. Pancreaticoduodenal arcades and dorsal pancreatic artery: comparison of CT angiography with three-dimensional volume rendering, maximum intensity projection, and shaded-surface display. *AJR* 1999;172(4):925-31.
17. Addis K, Hopper K, Iyriboz T, et al. CT angiography: in vitro comparison of five reconstruction methods. *AJR* 2001;177(5):1171-6.
18. Lee T, Lin C. Growing-cube isosurface extraction algorithm for medical volume data. *Comput Med Imaging Graph* 2001;25(5):405-15.
19. Viceconti M, Zannoni C, Testi D, Cappello A. CT data sets surface extraction for biomechanical modeling of long bones. *Comput Methods Programs Biomed* 1999;59(3):159-66.
20. Levoy M. Display of surfaces from volume data. *IEEE Computer Graphics and Applications* 1988;8:29-37.

21. Levoy M. Efficient ray tracing of volume data. *ACM Transactions on Graphics* 1990;9(3):245-61.
22. Terwisscha van Scheltinga J, Bosma M, Smit J, Lobregt S. Image quality improvements in volume rendering. *Proceedings 4th conf Visualization in Biomedical Computing*, Hamburg, Sept 22-25 1997:87-92.
23. Luboldt W, Mann C, Tryon CL, et al. Computer-aided diagnosis in contrast-enhanced CT colonography: an approach based on contrast. *Eur Radiol* 2002;12(9):2236-41.
24. Hong L, Liang Z, Viswambharan A, et al. Reconstruction and visualization of 3D models of colonic surface. *IEEE Transactions on Nuclear Science* 1997;44(3):1297-302.
25. Paik DS, Beaulieu CF, Jeffrey RB, Rubin GD, Napel S. Automated flight path planning for virtual endoscopy. *Med Phys* 1998;25(5):629-37.
26. Neumann K, Winterer J, Kimmig M, et al. Real-time interactive virtual endoscopy of the tracheo-bronchial system: influence of CT imaging protocols and observer ability. *Eur J Radiol* 2000;33(1):50-4.
27. Rodenwaldt J, Kopka L, Roedel R, Margas A, Grabbe E. 3D virtual endoscopy of the upper airway: optimization of the scan parameters in a cadaver phantom and clinical assessment. *J Comput Assist Tomogr* 1997;21(3):405-11.
28. Wang G, Vannier MW. The effect of pitch in multislice spiral/helical CT. *Med Phys* 1999;26(12):2648-53.
29. Hopper KD, Iyriboz AT, Wise SW, Neuman JD, Mauger DT, Kasales CJ. Mucosal detail at CT virtual reality: surface versus volume rendering. *Radiology* 2000; 214(2):517-22.
30. Rogalla P, Hein E, Vogel F, Kopka L, Hamm B. Hybrid visualization in colon imaging: combining axial slices and virtual endoscopic views. *Radiology* 2000; 217(P):371.
31. Rogalla P, Bender A, Bick U, Huitema A, Terwisscha van Scheltinga J, Hamm B. Tissue transition projection (TTP) of the intestines. *Eur Radiol* 2000;10(5):806-10.
32. Zhang Z, Wang G, Brown BP, McFarland EG, Haller J, Vannier MW. Fast algorithm for soft straightening of the colon. *Acad Radiol* 2000;7(3):142-8.
33. Fletcher JG, Johnson CD, Reed JE, Garry J. Feasibility of planar virtual pathology: a new paradigm in volume-rendered CT colonography. *J Comput Assist Tomogr* 2001;25(6):864-9.
34. Hoppe H, Quattropani C, Spreng A, Mattich J, Netzer P, Dinkel H. Virtual colon dissection with CT colonography compared with axial interpretation and conventional colonoscopy: preliminary results. *AJR* 2004;182(5):1151-8.
35. Rogalla P, Hein E, Vogel F, Kopka L, Hamm B. Impact of multislice CT on polyp detection in virtual colonoscopy. *Radiology* 2000;217(P):369.
36. Young I. Sampling density and quantitative microscopy. *Anal Quant Cytol Histol* 1988;10(4):269-75.
37. Taylor SA, Halligan S, Bartram CI, et al. Multi-detector row CT colonography: effect of collimation, pitch, and orientation on polyp detection in a human colectomy specimen. *Radiology* 2003;229(1):109-18.
38. Laghi A, Iannaccone R, Mangiapane F, Piacentini F, Iori S, Passariello R. Experimental colonic phantom for the evaluation of the optimal scanning technique for CT colonography using a multidetector spiral CT equipment. *Eur Radiol* 2003; 13(3):459-66.
39. Macari M, Milano A, Lavelle M, Berman P, Megibow AJ. Comparison of time-efficient CT colonography with two- and three-dimensional colonic evaluation for detecting colorectal polyps. *AJR* 2000;174(6):1543-9.

40. Pickhardt PJ, Choi JR, Hwang I, et al. Computed tomographic virtual colonoscopy to screen for colorectal neoplasia in asymptomatic adults. *N Engl J Med* 2003; 349(23):2191-200.
41. Hirschmann A. Über Endoskopie der Nase und der Nasennebenhöhlen. Eine neue Untersuchungsmethode. *Arch Laryngol Rhinol* 1903;14:195-202.
42. Grevers G, Menauer F, Leunig A, Caversaccio M, Kastenbauer E. Navigation surgery in diseases of the paranasal sinuses. *Laryngorhinootologie* 1999;78(1):41-6.
43. Hajek M. Zur Diagnose und intranasalen chirurgischen Behandlung der Eiterungen der Keilbeinhöhle. *Arch Laryngol Rhinol* 1904;16:105-8.
44. Halle W. Externe oder interne Operation der Nasennebenhöhleneiterungen. *Berl Klin Wochenschr* 1906;43:1369-72, 404-407.
45. Mosher P. The applied anatomy and the intranasal surgery of the ethmoid labyrinth. *Trans Am Laryngeal Assoc* 1912;34(25-45).
46. Gunkel AR, Freysinger W, Thumfart WF. 3D anatomo-radiological basis of endoscopic surgery of the paranasal sinuses. *Surg Radiol Anat* 1997;19(1):7-10.
47. Stammberger H. Unsere endoskopische Operationstechnik der lateralen Nasenwand--ein endoskopisch-chirurgisches Konzept zur Behandlung entzündlicher Nasennebenhöhlenerkrankungen. *Laryngol Rhinol Otol (Stuttg)* 1985;64(11):559-66.
48. Stammberger H. History of rhinology: anatomy of the paranasal sinuses. *Rhinology* 1989;27(3):197-210.
49. Kennedy DW. Functional endoscopic sinus surgery. Technique. *Arch Otolaryngol* 1985;111(10):643-9.
50. Kennedy DW, Kennedy EM. Endoscopic sinus surgery. *Aorn J* 1985;42(6):932, 4, 6.
51. Dursun E, Bayiz U, Korkmaz H, Akmansu H, Uygur K. Follow-up results of 415 patients after endoscopic sinus surgery. *Eur Arch Otorhinolaryngol* 1998;255(10):504-10.
52. "Statistisches Bundesamt" Germany, 1994-1996. Anzahl stationär behandelter Patienten wegen Sinusitis.
53. Lobe LP. Indikationen zu transnasalen endoskopischen und mikroskopischen sowie ausseren Nasennebenhöhlenoperationen. Ein kritischer Zwischenbericht. *HNO* 1991;39(6):233-5.
54. Smith LF, Brindley PC. Indications, evaluation, complications, and results of functional endoscopic sinus surgery in 200 patients. *Otolaryngol Head Neck Surg* 1993;108(6):688-96.
55. May M, Levine HL, Mester SJ, Schaitkin B. Complications of endoscopic sinus surgery: analysis of 2108 patients--incidence and prevention. *Laryngoscope* 1994; 104(9):1080-3.
56. Blokmanis A. Endoscopic diagnosis, treatment, and follow-up of tumours of the nose and sinuses. *J Otolaryngol* 1994;23(5):366-9.
57. Messerklinger W. Technik und Möglichkeiten der Nasenendoskopie. *HNO* 1972; 20(5):133-5.
58. Sener Y. Paranasal sinus endoscopy. *Soins Chir* 1994;164:7-8.
59. Messerklinger W. Über die Drainage der menschlichen Nasennebenhöhlen unter normalen und pathologischen Bedingungen. 1. Monatsschr Ohrenheilkd *Laryngorhinol* 1966;100(1):56-68.
60. Da Vinci L. In: Skillern RH, ed. Accessory sinuses of the nose. 2nd ed. Philadelphia: Lippincott; 1920.
61. Zinreich SJ. Imaging of the nasal cavity and paranasal sinuses. *Curr Opin Radiol* 1992;4(1):112-6.

62. Pockler C, Brambs HJ, Plinkert P. Computertomographie der Nasennebenhöhlen vor endonasaler Operation. *Radiologe* 1994;34(2):79-83.
63. Melhem ER, Oliverio PJ, Benson ML, Leopold DA, Zinreich SJ. Optimal CT evaluation for functional endoscopic sinus surgery. *AJNR Am J Neuroradiol* 1996; 17(1):181-8.
64. Kosling S, Wagner F, Schulz HG, Heywang-Kobrunner S. Knöcherne Variationen im koronaren Nasennebenhöhlen-CT. *Fortschr Röntgenstr* 1993;159(6):506-10.
65. Meyers RM, Valvassori G. Interpretation of anatomic variations of computed tomography scans of the sinuses: a surgeon's perspective. *Laryngoscope* 1998; 108(3):422-5.
66. Mason JD, Jones NS, Hughes RJ, Holland IM. A systematic approach to the interpretation of computed tomography scans prior to endoscopic sinus surgery. *J Laryngol Otol* 1998;112(10):986-90.
67. Kopp W, Stammberger H, Fotter R. Special radiologic imaging of paranasal sinuses. A prerequisite for functional endoscopic sinus surgery. *Eur J Radiol* 1988;8(3):153-6.
68. Mafee MF, Chow JM, Meyers R. Functional endoscopic sinus surgery: anatomy, CT screening, indications, and complications. *AJR* 1993;160(4):735-44.
69. Boguslawska-Staniaszczyk R, Krzeski A, Samolinski B. The usefulness of CT studies for the needs of endoscopic surgery of the nose and paranasal sinuses. *Otolaryngol Pol* 1994;48 Suppl 17:63-75.
70. Chakeres DW. Computed tomography of the ethmoid sinuses. *Otolaryngol Clin North Am* 1985;18(1):29-42.
71. Som PM. CT of the paranasal sinuses. *Neuroradiology* 1985;27:189-201.
72. Chow JM, Mafee MF. Radiologic assessment preoperative to endoscopic sinus surgery. *Otolaryngol Clin North Am* 1989;22(4):691-701.
73. Babbel R, Harnsberger HR, Nelson B, Sonkens J, Hunt S. Optimization of techniques in screening CT of the sinuses. *AJNR Am J Neuroradiol* 1991;12(5):849-54.
74. Beus J, Kauczor HU, Schwikkert HC, Mohr W, Mildenberger P. Koronare Nasennebenhöhlen-CT: Einsatz der Spiraltechnik. *Aktuelle Radiol* 1995;5(3):189-91.
75. Suojanen JN, Regan F. Spiral CT scanning of the paranasal sinuses. *AJNR Am J Neuroradiol* 1995;16(4):787-9.
76. Hosemann W. Endonasal surgery of the paranasal sinuses--concepts, techniques, results, complications and revision interventions. *Eur Arch Otorhinolaryngol Suppl* 1996;1:155-269.
77. Shankar L, Evans K, Hawke M, Stammberger H. An atlas of imaging of the paranasal sinuses. London: Martin Dunitz Ltd, The Livery House, 7-9 Pratt Street, London NW1 OAE; 1994.
78. Hein E, Rogalla P, Klingebiel R, Hamm B. Low-dose CT of the paranasal sinuses with eye lens protection: effect on image quality and radiation dose. *Eur Radiol* 2002; 12(7):1693-6.
79. Pansdorf H. Die fraktionierte Dünndarmfüllung und ihre klinische Bedeutung. *Fortschr Röntgenstr* 1937;56:627-34.
80. Pribram BO, Kleiber N. Ein neuer Weg zur röntgenologischen Darstellung des Duodenums (Pneumo-duodenum). *Fortschr Röntgenstr* 1927;36:739.
81. Gershon-Cohen J, Shay H. Barium enteroclysis. *AJR* 1939;42:456-8.
82. Schatzki R. Small intestinal enema. By Richard Schatzki, 1942 [classical article]. *AJR* 1988;150(3):499-507.
83. Lura A. Enema of the small intestine with special emphasis on the diagnosis of tumours. *Br J Radiol* 1951;24:264-71.

84. Sellink JL. Radiologic examination of the small intestine by duodenal intubation. *Acta Radiol [Diagn] (Stockh)* 1974;15(3):318-32.
85. Sellink JL. Proceedings: Why enteroclysis of the small intestine? *Br J Radiol* 1976;49(579):288-9.
86. Maglinte DD, Burney BT, Miller RE. Lesions missed on small-bowel follow-through: analysis and recommendations. *Radiology* 1982;144(4):737-9.
87. Ott DJ, Chen YM, Gelfand DW, Van Swearingen F, Munitz HA. Detailed per-oral small bowel examination vs. enteroclysis. Part II: Radiographic accuracy. *Radiology* 1985;155(1):31-4.
88. Ott DJ, Chen YM, Gelfand DW, Van Swearingen F, Munitz HA. Detailed per-oral small bowel examination vs. enteroclysis. Part I: Expenditures and radiation exposure. *Radiology* 1985;155(1):29-31.
89. Nolan DJ, Cadman PJ, Jeffree MA. Re: Detailed per-oral small-bowel examination versus enteroclysis [letter]. *Radiology* 1985;157(3):836-7.
90. Fleckenstein P, Pedersen G. The value of the duodenal intubation method (sellink modification) for the radiological visualization of the small bowel. *Scand J Gastroenterol* 1975;10(4):423-5.
91. Ekberg O. Crohn's disease of the small bowel examined by double contrast technique: a comparison with oral technique. *Gastrointest Radiol* 1977;1(4):355-9.
92. Gmünder U, Wirth W. Doppelkontrastdarstellung. *Schweiz Med Wochenschr* 1970; 100:1236.
93. Pozniak MA, Scanlan KA, Yandow D, Mulligan G. Current status of small-bowel ultrasound. *Radiologe* 1990;30(6):254-65.
94. Maccioni F, Rossi P, Gourtsoyiannis N, Beazzi M, Di Nardo R, Broglia L. US and CT findings of small bowel neoplasms. *Eur Radiol* 1997;7(9):1398-409.
95. Chaoui R, Kalache K, Hartung J. Application of three-dimensional power Doppler ultrasound in prenatal diagnosis. *Ultrasound Obstet Gynecol* 2001;17(1):22-9.
96. Ruano R, Molho M, Roume J, Ville Y. Prenatal diagnosis of fetal skeletal dysplasias by combining two-dimensional and three-dimensional ultrasound and intrauterine three-dimensional helical computer tomography. *Ultrasound Obstet Gynecol* 2004; 24(2):134-40
97. Hartung J, Kalache K, Chaoui R. Der 3D-Power-Doppler-Ultraschall (3D-PDU) in der fetalen Diagnostik. *Ultraschall Med* 2004;25(3):200-5.
98. James S, Balfe DM, Lee JK, Picus D. Small-bowel disease: categorization by CT examination. *AJR* 1987;148(5):863-8.
99. Duvoisin B, Schnyder P. Die Computertomographie des Dünndarms. *Radiologe* 1990; 30(6):280-5.
100. Horton KM, Corl FM, Fishman EK. CT of nonneoplastic diseases of the small bowel: spectrum of disease. *J Comput Assist Tomogr* 1999;23(3):417-28.
101. Gayer G, Zissin R, Apter S, Shemesh E, Heldenberg E. Acute diverticulitis of the small bowel: CT findings. *Abdom Imaging* 1999;24(5):452-5.
102. Makita O, Ikushima I, Matsumoto N, Arikawa K, Yamashita Y, Takahashi M. CT differentiation between necrotic and nonnecrotic small bowel in closed loop and strangulating obstruction. *Abdom Imaging* 1999;24(2):120-4.
103. Thoeni RF, Rogalla P. Current CT/MRI examination of the lower intestinal tract. *Baillieres Clin Gastroenterol* 1994;8:765-96.
104. Siegel MJ, Evans SJ, Balfe DM. Small bowel disease in children: diagnosis with CT. *Radiology* 1988;169(1):127-30.
105. Low VHS. The query corner. Bowel wall thickening on CT. *Abdom Imaging* 1998; 23(1):107-10.

106. Rogalla P, Mutze S, Hamm B. Body CT: state-of-the-art. Munich: W. Zuckschwerdt, Germany; 1996.
107. Silverman PM. Handbook of helical (spiral) computed tomography: techniques & protocols. Corona Del Mar, CA, USA: Mallinckrodt Medical, Inc. by Med Write, Inc.; 1994.
108. Thoeni RF, Filson RG. Abdominal and pelvic CT: use of oral metoclopramide to enhance bowel opacification. *Radiology* 1988;169:391-3.
109. Ha HK, Lee EH, Lim CH, et al. Application of MRI for small intestinal diseases. *J Magn Reson Imaging* 1998;8(2):375-83.
110. Lee JK, Marcos HB, Semelka RC. MR imaging of the small bowel using the HASTE sequence. *AJR* 1998;170(6):1457-63.
111. Semelka RC, John G, Kelekis NL, Burdeny DA, Ascher SM. Small bowel neoplastic disease: demonstration by MRI. *J Magn Reson Imaging* 1996;6(6):855-60.
112. Madsen SM, Thomsen HS, Schlichting P, Dorph S, Munkholm P. Evaluation of treatment response in active Crohn's disease by low-field magnetic resonance imaging. *Abdom Imaging* 1999;24(3):232-9.
113. Madsen SM, Thomsen HS, Munkholm P, Schlichting P, Davidsen B. Magnetic resonance imaging of Crohn disease: early recognition of treatment response and relapse. *Abdom Imaging* 1997;22(2):164-6.
114. Grubnic S, Padhani AR, Revell PB, Husband JE. Comparative efficacy of and sequence choice for two oral contrast agents used during MR imaging. *AJR* 1999; 173(1):173-8.
115. Rogalla P, Werner Rustner M, Huitema A, van Est A, Meiri N, Hamm B. Virtual endoscopy of the small bowel: phantom study and preliminary clinical results. *Eur Radiol* 1998;8(4):563-7.
116. Sellink JL, Rosenbusch G. Moderne Untersuchungstechnik des Dünndarms oder Die zehn Gebote des Enteroklysmas. *Radiologe* 1981;21(8):366-76.
117. Rogalla P, Mutze M. Verfahren und Vorrichtung zur Computertomographie-Durchleuchtung für Interventionen. Deutschland;1995. Patent Nr. DE 19520017.
118. Hurlstone D, Cross S, Adam I, et al. Efficacy of high magnification chromoscopic colonoscopy for the diagnosis of neoplasia in flat and depressed lesions of the colorectum: a prospective analysis. *Gut* 2004;53(2):284-90.
119. Hurlstone D, Cross S, Lobo A. High-magnification chromoscopic ileoscopy in familial adenomatous polyposis: detection *in vivo* of colonic metaplasia and microadenoma formation. *Endoscopy* 2004;36(2):194.
120. Bruno M. Magnification endoscopy, high resolution endoscopy, and chromoscopy; towards a better optical diagnosis. *Gut* 2003;52 Suppl 4:iv7-11.
121. Johnson CD, Hara AK, Reed JE. Virtual endoscopy: what's in a name? *AJR* 1998; 171(5):1201-2.
122. Gilani S, Norbash AM, Ringl H, Rubin GD, Napel S, Terris DJ. Virtual endoscopy of the paranasal sinuses using perspective volume rendered helical sinus computed tomography. *Laryngoscope* 1997;107(1):25-9.
123. Plinkert P, Lowenheim H. Trends and perspectives in minimally invasive surgery in otorhinolaryngology-head and neck surgery. *Laryngoscope* 1997;107(11 Pt 1):1483-9.
124. Yanagisawa E, Christmas DA. The value of computer-aided (image-guided) systems for endoscopic sinus surgery. *Ear Nose Throat J* 1999;78(11):822-4, 6.
125. Edmond CV, Jr., Heskamp D, Sluis D, et al. ENT endoscopic surgical training simulator. *Stud Health Technol Inform* 1997;39:518-28.
126. Rudman DT, Stredney D, Sessanna D, et al. Functional endoscopic sinus surgery training simulator. *Laryngoscope* 1998;108(11 Pt 1):1643-7.

127. Hopper KD, Iyriboz AT, Wise SW, Fornadley JA. The feasibility of surgical site tagging with CT virtual reality of the paranasal sinuses. *J Comput Assist Tomogr* 1999;23(4):529-33.
128. Kruckels G, Korves B, Klimek L, Mosges R. Endoscopic surgery of the rhinobasis with a computer-assisted localizer. *Surg Endosc* 1996;10(4):453-6.
129. Freysinger W, Gunkel AR, Thumfart WF. Image-guided endoscopic ENT surgery. *Eur Arch Otorhinolaryngol* 1997;254(7):343-6.
130. Metson R, Cosenza M, Gliklich RE, Montgomery WW. The role of image-guidance systems for head and neck surgery. *Arch Otolaryngol Head Neck Surg* 1999; 125(10):1100-4.
131. Yamashita J, Yamauchi Y, Mochimaru M, Fukui Y, Yokoyama K. Real-time 3-D model-based navigation system for endoscopic paranasal sinus surgery. *IEEE Trans Biomed Eng* 1999;46(1):107-16.
132. Rust G, Holzknecht N, Olbrich D, Schopf U, Bruning R, Reiser M. Mehrschicht-Computertomographie des Dünndarms. Vorläufige Ergebnisse. *Radiologe* 1999; 39(11):965-70.
133. Bitterling H, Rock C, Reiser M. Die Computertomographie in der Diagnostik entzündlicher Darmerkrankungen: Methodik der MSCT und klinische Ergebnisse. *Radiologe* 2003;43(1):17-25.
134. Voderholzer W, Ortner M, Rogalla P, Beinhözl J, Lochs H. Diagnostic yield of wireless capsule enteroscopy in comparison with computed tomography enteroclysis. *Endoscopy* 2003;35(12):1009-14.
135. Sackner MA. Bronchofiberscopy. *Am Rev Respir Dis* 1975;111(1):62-88.
136. Liebler JM, Markin CJ. Fiberoptic bronchoscopy for diagnosis and treatment. *Crit Care Clin* 2000;16(1):83-100.
137. Becker H. Bronchoscopy. Year 2001 and beyond. *Clin Chest Med* 2001;22(2):225-39, vii.
138. Guidelines for competency and training in fiberoptic bronchoscopy. Section on Bronchoscopy, American College of Chest Physicians. *Chest* 1982;81(6):739.
139. Standards for training in endoscopy. Statement of the Committee on Bronchoesophagology, American College of Chest Physicians. *Chest* 1976;69(5):665-6.
140. Leitlinie Tracheo-Bronchoskopie. Leitlinien der Deutschen Gesellschaft für Hals-Nasen-Ohren-Heilkunde, Kopf- und Hals-Chirurgie. *HNO* 1998;46(7):652-3.
141. Torrington K. Bronchoscopy training and competency: how many are enough? *Chest* 2000;118(3):572-3.
142. Burke AJ, Vining DJ, McGuirt WF, Jr., Postma G, Browne JD. Evaluation of airway obstruction using virtual endoscopy. *Laryngoscope* 2000;110(1):23-9.
143. Rogalla P, Rückert JC, Schmidt B, Witt C, Meiri N, Hamm B. Virtuelle Bronchoskopie. *Radiologe* 2001;41(3):261-8.
144. Tyczynski J, Bray F, Parkin D. Lung cancer in Europe in 2000: epidemiology, prevention, and early detection. *Lancet Oncol* 2003;4(1):45-55.
145. Bach P, Kattan M, Thornquist M, et al. Variations in lung cancer risk among smokers. *J Natl Cancer Inst* 2003;95(6):470-8.
146. Bach P, Kelley M, Tate R, McCrory D. Screening for lung cancer: a review of the current literature. *Chest* 2003;123(1 Suppl):72S-82S.
147. Prokop M, Schaefer-Prokop C, Galanski M. Spiral-CT der Lunge. Technik, Befunde, Stellenwert. *Radiologe* 1996;36(6):457-69.
148. Kauczor H, Heussel C, Thelen M. Radiodiagnostik der Lunge. *Radiologe* 2000; 40(10):870-7.

149. Fischbach F, Knollmann F, Griesshaber V, Freund T, Akkol E, Felix R. Detection of pulmonary nodules by multislice computed tomography: improved detection rate with reduced slice thickness. *Eur Radiol* 2003;13(10):2378-83.
150. Jain P, Arroliga A. Spiral CT for lung cancer screening: is it ready for prime time? *Cleve Clin J Med* 2001;68(1):74-81.
151. Nawa T, Nakagawa T, Kusano S, Kawasaki Y, Sugawara Y, Nakata H. Lung cancer screening using low-dose spiral CT: results of baseline and 1-year follow-up studies. *Chest* 2002;122(1):15-20.
152. Diederich S, Wormanns D, Heindel W. Lungenkrebsfrüherkennung mit Low-dose-CT: ein Update. *Radiologe* 2002;42(8):608-11.
153. Henschke C, McCauley D, Yankelevitz D, et al. Early Lung Cancer Action Project: overall design and findings from baseline screening. *Lancet* 1999;354(9173):99-105.
154. Diederich S, Wormanns D, Heindel W. Lung cancer screening with low-dose CT. *Eur J Radiol* 2003;45(1):2-7.
155. Weisser G, Lehmann K, Scheck R, Coppenrath E, Georgi M. Dose and image quality of electron-beam CT compared with spiral CT. *Invest Radiol* 1999;34(6):415-20.
156. McCollough C, Zink F. Performance evaluation of a multi-slice CT system. *Med Phys* 1999;26(11):2223-30.
157. Suess C, Kalender WA, Coman JM. New low-contrast resolution phantoms for computed tomography. *Med Phys* 1999;26(2):296-302.
158. Ferretti G, Thony F, Bosson J, Pison C, Arbib F, Coulomb M. Benign abnormalities and carcinoid tumors of the central airways: diagnostic impact of CT bronchography. *AJR* 2000;174(5):1307-13.
159. Summers R, Aggarwal N, Sneller M, et al. CT virtual bronchoscopy of the central airways in patients with Wegener's granulomatosis. *Chest* 2002;121(1):242-50.
160. Inoue K. CT virtual bronchoscopy for detecting Wegener granulomatosis. *Chest* 2002;122(4):1496; author reply.
161. Finkelstein S, Schrump D, Nguyen D, Hewitt S, Kunst T, Summers R. Comparative evaluation of super high-resolution CT scan and virtual bronchoscopy for the detection of tracheobronchial malignancies. *Chest* 2003;124(5):1834-40.
162. Rapp-Bernhardt U, Welte T, Doehring W, Kropf S, Bernhardt T. Diagnostic potential of virtual bronchoscopy: advantages in comparison with axial CT slices, MPR and mIP? *Eur Radiol* 2000;10(6):981-8.
163. Fleiter T, Merkle E, Aschoff A, et al. Comparison of real-time virtual and fiberoptic bronchoscopy in patients with bronchial carcinoma: opportunities and limitations. *AJR* 1997;169(6):1591-5.
164. Liewald F, Lang G, Fleiter T, Sokiranski R, Halter G, Orend K. Comparison of virtual and fiberoptic bronchoscopy. *Thorac Cardiovasc Surg* 1998;46(6):361-4.
165. Rapp-Bernhardt U, Welte T, Budinger M, Bernhardt T. Comparison of three-dimensional virtual endoscopy with bronchoscopy in patients with oesophageal carcinoma infiltrating the tracheobronchial tree. *Br J Radiol* 1998;71(852):1271-8.
166. Ahmad M, Dweik RA. Future of flexible bronchoscopy. *Clin Chest Med* 1999;20(1):1-17.
167. Uffmann M, Prokop M. Multislice-CT der Lunge. Technik und klinische Anwendungen. *Radiologe* 2001;41(3):240-7.
168. Prevrhal S, Fox J, Shepherd J, Genant H. Accuracy of CT-based thickness measurement of thin structures: modeling of limited spatial resolution in all three dimensions. *Med Phys* 2003;30(1):1-8.
169. Fuchs T, Krause J, Schaller S, Flohr T, Kalender WA. Spiral interpolation algorithms for multislice spiral CT--part II: measurement and evaluation of slice sensitivity.

- profiles and noise at a clinical multislice system. *IEEE Trans Med Imaging* 2000;19(9):835-47.
170. Rogalla P, Enzweiler C, Schmidt E, Taupitz M, Bender A, Hamm B. Thoraxdiagnostik mit der Elektronenstrahl-Computertomographie. *Radiologe* 1998; 38(12):1029-35.
 171. Buthiau D, Antoine E, Piette JC, Nizri D, Baldeyrou P, Khayat D. Virtual tracheobronchial endoscopy: educational and diagnostic value. *Surg Radiol Anat* 1996; 18(2):125-31.
 172. Summers RM, Merran S. Navigational aids for real-time virtual bronchoscopy [Virtual imaging: applications to virtual endoscopy]. *AJR* 1997;168(5):1165-70.
 173. Bricault I, Ferretti G, Cinquin P. Registration of real and CT-derived virtual bronchoscopic images to assist transbronchial biopsy. *IEEE Trans Med Imaging* 1998; 17(5):703-14.
 174. Askew A, Ward M, Cowen A. The influence of colonoscopy on the operative management of colorectal cancer. *Med J Aust* 1986;145(6):254-5.
 175. Herbst C, Sessions J, Lapis J. Fiberoptic colonoscopic examination in surgical patients with colorectal cancer. *South Med J* 1980;73(5):548-50, 54.
 176. Langevin J, Nivatvongs S. The true incidence of synchronous cancer of the large bowel. A prospective study. *Am J Surg* 1984;147(3):330-3.
 177. Isler J, Brown P, Lewis F, Billingham R. The role of preoperative colonoscopy in colorectal cancer. *Dis Colon Rectum* 1987;30(6):435-9.
 178. Finan P, Ritchie J, Hawley P. Synchronous and 'early' metachronous carcinomas of the colon and rectum. *Br J Surg* 1987;74(10):945-7.
 179. Fante R, Roncucci L, Di GC, et al. Frequency and clinical features of multiple tumors of the large bowel in the general population and in patients with hereditary colorectal carcinoma. *Cancer* 1996;77(10):2013-21.
 180. Smith G, O'Dwyer P. Sensitivity of double contrast barium enema and colonoscopy for the detection of colorectal neoplasms. *Surg Endosc* 2001;15(7):649-52.
 181. Ee H, Semmens J, Hoffman N. Complete colonoscopy rarely misses cancer. *Gastrointest Endosc* 2002;55(2):167-71.
 182. Vignati P, Welch J, Cohen J. Endoscopic localization of colon cancers. *Surg Endosc* 1994;8(9):1085-7.
 183. Hancock J, Talbot R. Accuracy of colonoscopy in localisation of colorectal cancer. *Int J Colorectal Dis* 1995;10(3):140-1.
 184. Wehrmann K, Frühmorgen P. Evaluation of a new three-dimensional magnetic imaging system for use during colonoscopy. *Endoscopy* 2002;34(11):905-8.
 185. Shah S, Pearson H, Moss S, Kweka E, Jalal P, Saunders B. Magnetic endoscope imaging: a new technique for localizing colonic lesions. *Endoscopy* 2002;34(11):900-4.
 186. Norfleet RG, Ryan ME, Wyman JB, et al. Barium enema versus colonoscopy for patients with polyps found during flexible sigmoidoscopy. *Gastrointest Endosc* 1991; 37:531-4.
 187. MacCarty R. Colorectal cancer: the case for barium enema. *Mayo Clin Proc* 1992; 67(3):253-7.
 188. Chen H, Sheen-Chen S. Synchronous and "early" metachronous colorectal adenocarcinoma: analysis of prognosis and current trends. *Dis Colon Rectum* 2000; 43(8):1093-9.
 189. Barillari P, Ramacciato G, De AR, et al. Effect of preoperative colonoscopy on the incidence of synchronous and metachronous neoplasms. *Acta Chir Scand* 1990; 156(2):163-6.

190. Gillespie J, Kelly B. Double contrast barium enema and colorectal carcinoma: sensitivity and potential role in screening. *Ulster Med J* 2001;70(1):15-8.
191. Anderson N, Cook H, Coates R. Colonoscopically detected colorectal cancer missed on barium enema. *Gastrointest Radiol* 1991;16(2):123-7.
192. Markus J, Somers S, O'Malley B, Stevenson G. Double-contrast barium enema studies: effect of multiple reading on perception error. *Radiology* 1990;175(1):155-6.
193. McDonald S, Lyall P, Israel L, Coates R, Frizelle F. Why barium enemas fail to identify colorectal cancers. *ANZ J Surg* 2001;71(11):631-3.
194. Okada Y, Kusano S, Endo T. Double-contrast barium enema study with computed radiography: assessment in detection of colorectal polyps. *J Digit Imaging* 1994;7(3):154-9.
195. Stefansson T, Bergman A, Ekbom A, Nyman R, Pahlman L. Accuracy of double contrast barium enema and sigmoideoscopy in the detection of polyps in patients with diverticulosis. *Acta Radiol* 1994;35(5):442-6.
196. Clarke JC, Cranley K, Kelly BE, Bell K, Smith PH. Provision of MRI can significantly reduce CT collective dose. *Br J Radiol* 2001;74(886):926-31.
197. Culpan D, Mitchell A, Hughes S, Nutman M, Chapman A. Double contrast barium enema sensitivity: a comparison of studies by radiographers and radiologists. *Clin Radiol* 2002;57(7):604-7.
198. Connolly D, Traill Z, Reid H, Copley S, Nolan D. The double contrast barium enema: a retrospective single centre audit of the detection of colorectal carcinomas. *Clin Radiol* 2002;57(1):29-32.
199. Zmora O, Pikarsky A, Wexner S. Bowel preparation for colorectal surgery. *Dis Colon Rectum* 2001;44(10):1537-49.
200. Grobmyer A, Kerlan R, Peterson C, Dragstedt L. Barium peritonitis. *Am Surg* 1984;50(2):116-20.
201. Yamamura M, Nishi M, Furubayashi H, Hioki K, Yamamoto M. Barium peritonitis. Report of a case and review of the literature. *Dis Colon Rectum* 1985;28(5):347-52.
202. Williams S, Harned R. Recognition and prevention of barium enema complications. *Curr Probl Diagn Radiol* 1991;20(4):123-51.
203. Dachman AH, Kuniyoshi JK, Boyle CM, et al. CT colonography with three-dimensional problem solving for detection of colonic polyps. *AJR* 1998;171(4):989-95.
204. Wessling J, Fischbach R, Domagk D, Lugering N, Neumann E, Heindel W. Kolorektale Polypen: Detektionsraten der Mehrschicht-CT-Kolographie. *Fortschr Röntgenstr* 2001;173(12):1069-71.
205. Hara AK, Johnson CD, Reed JE, et al. Colorectal polyp detection using CT colonography: initial assessment of sensitivity and specificity. *Radiology* 1997;205:59-65.
206. Munikrishnan V, Gillams A, Lees W, Vaizey C, Boulos P. Prospective study comparing multislice CT colonography with colonoscopy in the detection of colorectal cancer and polyps. *Dis Colon Rectum* 2003;46(10):1384-90.
207. Bond JH. Small flat adenomas appear to have little clinical importance in Western countries. *Gastrointest Endosc* 1995;42:184-6.
208. Pilbrow S, Hertzog P, Linnane A. The adenoma-carcinoma sequence in the colorectum--early appearance of a hierarchy of small intestinal mucin antigen (SIMA) epitopes and correlation with malignant potential. *Br J Cancer* 1992;66(4):748-57.
209. Murakami R, Tsukuma H, Kanamori S, et al. Natural history of colorectal polyps and the effect of polypectomy on occurrence of subsequent cancer. *Int J Cancer* 1995; 46:159-64.

210. Hofstad B, Vatn M. Growth rate of colon polyps and cancer. *Gastrointest Endosc Clin N Am* 1997;7(3):345-63.
211. Kim E, Lance P. Colorectal polyps and their relationship to cancer. *Gastroenterol Clin North Am* 1997;26(1):1-17.
212. Aldridge A, Simson J. Histological assessment of colorectal adenomas by size. Are polyps less than 10 mm in size clinically important? *Eur J Surg* 2001;167(10):777-81.
213. Nusko G, Mansmann U, Altendorf-Hofmann A, Groitl H, Wittekind C, Hahn E. Risk of invasive carcinoma in colorectal adenomas assessed by size and site. *Int J Colorectal Dis* 1997;12(5):267-71.
214. Fenlon H, Nunes D, Clarke P, Ferrucci J. Colorectal neoplasm detection using virtual colonoscopy: a feasibility study. *Gut* 1998;43(6):806-11.
215. Fenlon HM, McAneny DB, Nunes DP, Clarke PD, Ferrucci JT. Occlusive colon carcinoma: virtual colonoscopy in the preoperative evaluation of the proximal colon. *Radiology* 1999;210(2):423-8.
216. Glover C, Douse P, Kane P, et al. Accuracy of investigations for asymptomatic colorectal liver metastases. *Dis Colon Rectum* 2002;45(4):476-84.
217. Valls C, Andia E, Sanchez A, et al. Hepatic metastases from colorectal cancer: preoperative detection and assessment of resectability with helical CT. *Radiology* 2001;218(1):55-60.
218. Kinkel K, Lu Y, Both M, Warren R, Thoeni R. Detection of hepatic metastases from cancers of the gastrointestinal tract by using noninvasive imaging methods (US, CT, MR imaging, PET): a meta-analysis. *Radiology* 2002;224(3):748-56.
219. Braunschweig R, Hundt W, Breiteneder T, Beilicke M, Reiser M. Nieren-Spiral-CT. Indikationen, Durchführung, Ergebnisse. *Radiologe* 1999;39(5):354-60.
220. Morrin M, Farrell R, Kruskal J, Reynolds K, McGee J, Raptopoulos V. Utility of intravenously administered contrast material at CT colonography. *Radiology* 2000;217(3):765-71.
221. Yee J, Akerkar G, Hung R, Steinauer-Gebauer A, Wall S, McQuaid K. Colorectal neoplasia: performance characteristics of CT colonography for detection in 300 patients. *Radiology* 2001;219(3):685-92.
222. Fletcher J, Johnson C, Welch T, et al. Optimization of CT colonography technique: prospective trial in 180 patients. *Radiology* 2000;216(3):704-11.
223. McAndrew MR, Saba AK. Efficacy of routine preoperative computed tomography scans in colon cancer. *Am Surg* 1999;65(3):205-8.
224. Acunas B, Rozanes I, Acunas G, Celik L, Sayi I, Gokmen E. Preoperative CT staging of colon carcinoma (excluding the recto-sigmoid region). *Eur J Radiol* 1990;11(2):150-3.
225. Zerhouni EA, Rutter C, Hamilton SR, et al. CT and MR imaging in the staging of colorectal carcinoma: report of the Radiology Diagnostic Oncology Group II. *Radiology* 1996;200(2):443-51.
226. Maier A, Fuchsberger M. Preoperative staging of rectal cancer. *Eur J Radiol* 2003;47(2):89-97.
227. Wheeler J, Warren B, Mortensen N, et al. Quantification of histologic regression of rectal cancer after irradiation: a proposal for a modified staging system. *Dis Colon Rectum* 2002;45(8):1051-6.
228. Pellegrini P, Berghella A, Del BT, Maccarone D, Casciani C, Adorno D. Disease stage prognostic indices in the early clinical screening of colorectal cancer patients. *Cancer Biother Radiopharm* 1998;13(2):89-98.

229. Schaller S, Flohr T, Klingenbeck K, Krause J, Fuchs T, Kalender WA. Spiral interpolation algorithm for multislice spiral CT--part I: theory. *IEEE Trans Med Imaging* 2000;19(9):822-34.
230. Rogalla P, Meiri N, Rückert JC, Hamm B. Colonography using multislice CT. *Eur J Radiol* 2000;36(2):81-5.