

CURRICULUM VITAE



NAME

Woong Sub Koom

PRESENT POSITION

Associate professor, Department of Radiation Oncology, Yonsei University College of Medicine
Head of Cancer Information Center, Yonsei Cancer Center

OFFICE

Department of Radiation Oncology, Yonsei Cancer Center, Yonsei University Health System
50 Yonsei-ro, Seodaemun-gu, Seoul, Republic of Korea, 120-752
Tel: 82-2-2228-8116
Fax: 82-2-2227-7823
E-mail: mdgold@yuhs.ac

EDUCATION

1993-1999	M.D. Yonsei University, College of Medicine, Korea
2002-2004	M.S. Yonsei University, Graduate School, Medicine, Korea

2007-2013 Ph.D. Yonsei University, Graduate School, Medicine, Korea

POSTGRADUATE TRAINING

1999-2000 Internship, Yonsei University Health System, Korea

2000-2004 Residency, Radiation Oncology, Yonsei University Health System, Korea

MILITARY SERVICE

2004-2005 Public Health Doctor, Korea Health Industry Development Institute

2005-2007 Public Health Doctor, National Cancer Center, Korea

ACADEMIC APPOINTMENT

2007-2009 Instructor, Department of Radiation Oncology, Yonsei University College of Medicine, Korea

2009-2014 Assistant Professor in the Department of Radiation Oncology, Yonsei University College of Medicine, Korea

2015-present Associate Professor in the Department of Radiation Oncology, Yonsei University College of Medicine, Korea

MEMBERSHIP

2004-Present Korean Society for Radiation Oncology

2010-Present Korean Pain Research Society

2011-Present Korean Gastric Cancer Association

2013-Present Korean Society of Coloproctology

2014-Present Korean Association for Clinical Oncology

LICENSE and CERTIFICATION

1999 Medical License of Korea

2004 Korean Board of Radiation Oncology

AWARDS

- 2004 Travel Grant, KASTRO (The Korean American Society for Therapeutic Radiology and Oncology)
- 2008 Poster Award, KOSTRO (The Korean Society for Therapeutic Radiology and Oncology)
- 2010 Poster Award, KOSTRO (The Korean Society for Therapeutic Radiology and Oncology)
- 2012 Research Award, KOSTRO (The Korean Society for Therapeutic Radiology and Oncology)
- 2014 Academic Award, KOSTRO (The Korean Society for Therapeutic Radiology and Oncology)

RESEARCH SUPPORT (PI)

- 2009-2010 New Faculty research grant of Yonsei University College of Medicine
- 2012-2013 Faculty research grant of Yonsei University College of Medicine
- 2012-2013 Seoul Metropolitan Government, Seoul Business Agency
- 2015- National Research Foundation of Korea
- 2016- Korea Health Industry Development Institute

SPECIALTY and SERVICE

- Gastric Oncology Program
- Colorectal Oncology Program
- Urological Oncology Program
- Metastatic Spine Tumor Program
- Stereotactic Body Radiotherapy Program
- Palliative Treatment Program

SCIENTIFIC PUBLICATIONS (Peer-Reviewed Papers: Published and In Press)

1. Kim KH, Park MJ, Lim JS, Kim NK, Min BS, Ahn JB, Kim TI, Kim HG, Koom WS. Circumferential resection margin positivity after preoperative chemoradiotherapy based on magnetic resonance imaging for locally advanced rectal cancer: implication of boost radiotherapy to the involved mesorectal fascia. *Jpn J Clin Oncol.* 2016 Apr;46(4):316-22.
2. Kim H, Kim HM, Koom WS, Kim NK, Kim MJ, Kim H, Hur H, Lim JS. Profiling of rectal cancers MRI in pathological complete remission states after neoadjuvant concurrent chemoradiation therapy. *Clin Radiol.* 2016 Mar;71(3):250-7.

3. Kim KH, Shin SJ, Cho MS, Ahn JB, Jung M, Kim TI, Park YS, Kim H, Kim NK, Koom WS. A phase II study of preoperative mFOLFOX6 with short-course radiotherapy in patients with locally advanced rectal cancer and liver-only metastasis. *Radiother Oncol*. 2016 Feb;118(2):369-74.
4. Kim H, Myoung S, Koom WS, Kim NK, Kim MJ, Ahn JB, Hur H, Lim JS. MRI Risk Stratification for Tumor Relapse in Rectal Cancer Achieving Pathological Complete Remission after Neoadjuvant Chemoradiation Therapy and Curative Resection. *PLoS One*. 2016 Jan 5;11(1):e0146235.
5. Kim KH, Kim S, Kim GE, Koom WS, Kim SW, Nam EJ, Suh CO, Kim YB. De-escalation of the cumulative central radiation dose according to the tumor response can reduce rectal toxicity without compromising the treatment outcome in patients with uterine cervical cancer. *Gynecol Oncol*. 2015 Dec;139(3):439-46.
6. Jung M, Shin SJ, Koom WS, Jung I, Keum KC, Hur H, Min BS, Baik SH, Kim NK, Kim H, Lim JS, Hong SP, Kim TI, Roh JK, Park YS, Ahn JB. A Randomized Phase 2 Study of Neoadjuvant Chemoradiation Therapy With 5-Fluorouracil/Leucovorin or Irinotecan/S-1 in Patients With Locally Advanced Rectal Cancer. *Int J Radiat Oncol Biol Phys*. 2015 Dec 1;93(5):1015-22.
7. Cho Y, Chang JS, Kim MS, Lee J, Byun H, Kim N, Park SJ, Keum KC, Koom WS. Morphologic change of rectosigmoid colon using belly board and distended bladder protocol. *Radiat Oncol J*. 2015 Jun;33(2):134-41.
8. Lee J, Chang JS, Shin SJ, Lim JS, Keum KC, Kim NK, Ahn JB, Kim TI, Koom WS. Incorporation of radiotherapy in the multidisciplinary treatment of isolated retroperitoneal lymph node recurrence from colorectal cancer. *Ann Surg Oncol*. 2015 May;22(5):1520-6.
9. Kim MS, Lim JS, Hyung WJ, Lee YC, Rha SY, Keum KC, Koom WS. Neoadjuvant chemoradiotherapy followed by D2 gastrectomy in locally advanced gastric cancer. *World J Gastroenterol*. 2015 Mar 7;21(9):2711-8.
10. Yoon HI, Chung Y, Chang JS, Lee JY, Park SJ, Koom WS. Evaluating Variations of Bladder Volume Using an Ultrasound Scanner in Rectal Cancer Patients during Chemoradiation: Is Protocol-Based Full Bladder Maintenance Using a Bladder Scanner Useful to Maintain the Bladder Volume? *PLoS One*. 2015 Jun 3;10(6):e0128791.
11. Choi C, Koom WS, Kim TH, Yoon SM, Kim JH, Lee HS, Nam TK, Seong J. A prospective phase 2 multicenter study for the efficacy of radiation therapy following incomplete transarterial chemoembolization in unresectable hepatocellular carcinoma. *Int J Radiat Oncol Biol Phys*. 2014 Dec 1;90(5):1051-60.
12. Rhee WJ, Kim KH, Chang JS, Kim HJ, Choi S, Koom WS. Vertebral compression fractures after spine irradiation using conventional fractionation in patients with metastatic colorectal cancer. *Radiat Oncol J*. 2014 Dec;32(4):221-30.
13. Lee JY, Cho KS, Kwon JK, Jeh SU, Kang HW, Diaz RR, Ham WS, Koom WS, Keum KC, Choi YD. A competing risk analysis of cancer-specific mortality of initial treatment with radical

prostatectomy versus radiation therapy in clinically localized high-risk prostate cancer. *Ann Surg Oncol*. 2014 Nov;21(12):4026-33.

14. Chang JS, Koom WS, Lee Y, Yoon HI, Lee HS. Postoperative adjuvant chemoradiotherapy in D2-dissected gastric cancer: is radiotherapy necessary after D2-dissection? *World J Gastroenterol*. 2014 Sep 28;20(36):12900-7.
15. Chang JS, Lee Y, Lim JS, Kim NK, Baik SH, Min BS, Huh H, Koom WS. The magnetic resonance imaging-based approach for identification of high-risk patients with upper rectal cancer. *Ann Surg*. 2014 Aug;260(2):293-8.
16. Noh JM, Park W, Kim JS, Koom WS, Kim JH, Choi DH, Park HC. Outcome of Local Excision Following Preoperative Chemoradiotherapy for Clinically T2 Distal Rectal Cancer: A Multicenter Retrospective Study (KROG 12-06). *Cancer Res Treat*. 2014 Jul;46(3):243-9.
17. Suh YG, Lee IJ, Koom WS, Cha J, Lee JY, Kim SK, Lee CG. High-dose versus standard-dose radiotherapy with concurrent chemotherapy in stages II-III esophageal cancer. *Jpn J Clin Oncol*. 2014 Jun;44(6):534-40.
18. Hur H, Kim NK, Min BS, Baik SH, Lee KY, Koom WS, Ahn JB, Kim H. Can a biomarker-based scoring system predict pathologic complete response after preoperative chemoradiotherapy for rectal cancer? *Dis Colon Rectum*. 2014 May;57(5):592-601.
19. Chang JS, Keum KC, Kim NK, Baik SH, Min BS, Huh H, Lee CG, Koom WS. Preoperative chemoradiotherapy effects on anastomotic leakage after rectal cancer resection: a propensity score matching analysis. *Ann Surg*. 2014 Mar;259(3):516-21.
20. Yoon HI, Koom WS, Kim YB, Min BS, Lee KY, Kim NK, Shin SJ, Ahn JB, Keum KC. Predicting the pathologic response of locally advanced rectal cancer to neoadjuvant concurrent chemoradiation using enzyme-linked immunosorbent assays (ELISAs) for biomarkers. *J Cancer Res Clin Oncol*. 2014 Mar;140(3):399-409.
21. Chung Y, Koom WS, Ahn YC, Park HC, Kim HJ, Yoon SM, Shin S, Lee YJ. A survey of patterns of practice on palliative radiation therapy for bone metastasis in Korea. *J Cancer Res Clin Oncol*. 2013 Dec;139(12):2089-96.
22. Cha H, Yoon HI, Lee IJ, Koom WS, Han KH, Seong J. Clinical factors related to recurrence after hepatic arterial concurrent chemoradiotherapy for advanced but liver-confined hepatocellular carcinoma. *J Radiat Res*. 2013 Nov 1;54(6):1069-77.
23. Kim MS, Keum KC, Cha JH, Kim JH, Seong JS, Lee CG, Nam KC, Koom WS. Stereotactic body radiotherapy with helical tomotherapy for pain palliation in spine metastasis. *Technol Cancer Res Treat*. 2013 Aug;12(4):363-70.
24. Yoon HI, Chang JS, Lim JS, Noh SH, Hyung WJ, An JY, Lee YC, Rha SY, Kim KH, Koom WS. Defining the target volume for post-operative radiotherapy after D2 dissection in gastric cancer by CT-based vessel-guided delineation. *Radiother Oncol*. 2013 Jul;108(1):72-7.
25. Kim MS, Keum KC, Rhee WJ, Kim H, Kim M, Choi S, Nam KC, Koom WS. The location of locoregional recurrence in pathologic T3N0, non-irradiated lower rectal cancer. *Radiat Oncol J*. 2013 Jun;31(2):97-103.

26. Chang JS, Koom WS, Kim SW, Kim S, Kim YB, Kim YT, Kim GE. Risk stratification of abdominopelvic failure for FIGO stage III epithelial ovarian cancer patients: implications for adjuvant radiotherapy. *J Gynecol Oncol.* 2013 Apr;24(2):146-53.
27. Chang JS, Yoon HI, Cha HJ, Chung Y, Cho Y, Keum KC, Koom WS. Bladder filling variations during concurrent chemotherapy and pelvic radiotherapy in rectal cancer patients: early experience of bladder volume assessment using ultrasound scanner. *Radiat Oncol J.* 2013 Mar;31(1):41-7.
28. Kim KH, Chang JS, Keum KC, Ahn JB, Lee CG, Koom WS. Chemoradiotherapy in squamous cell carcinoma of the anal canal: a single institution experience. *Radiat Oncol J.* 2013 Mar;31(1):25-33.
29. Chung Y, Yoon HI, Kim JH, Nam KC, Koom WS. Is helical tomotherapy accurate and safe enough for spine stereotactic body radiotherapy? *J Cancer Res Clin Oncol.* 2013 Feb;139(2):243-8.
30. Chung Y, Yoon HI, Keum KC, Kim JH, Choi WH, Nam KC, Koom WS. Effect of belly board with bladder compression device on small bowel displacement from the radiotherapy field for rectal cancer. *Onkologie.* 2013;36(5):241-6.
31. Lee S, Kim DY, Kim SY, Koom WS, Lee SY, Kang JK, Kim MS. Curative radiotherapy using different radiation techniques for isolated lung metastasis from colorectal cancer. *Tumori.* 2013 Jan-Feb;99(1):68-75.
32. Kim JW, Kim YB, Choi JJ, Koom WS, Kim H, Kim NK, Ahn JB, Lee I, Cho JH, Keum KC. Molecular markers predict distant metastases after adjuvant chemoradiation for rectal cancer. *Int J Radiat Oncol Biol Phys.* 2012 Dec 1;84(5):e577-84.
33. Kim YS, Lee CG, Kim KH, Kim T, Lee J, Cho Y, Koom WS. Re-irradiation of recurrent esophageal cancer after primary definitive radiotherapy. *Radiat Oncol J.* 2012 Dec;30(4):182-8.
34. Ahn SJ, Koom WS, An CS, Lim JS, Lee SK, Suh JS, Song HT. Quantitative assessment of tumor responses after radiation therapy in a DLD-1 colon cancer mouse model using serial dynamic contrast-enhanced magnetic resonance imaging. *Yonsei Med J.* 2012 Nov 1;53(6):1147-53.
35. Kim YB, Kim YT, Cho NH, Koom WS, Kim S, Kim SW, Nam EJ, Kim GE. High-dose-rate intracavitary radiotherapy in the management of cervical intraepithelial neoplasia 3 and carcinoma in situ presenting with poor histologic factors after undergoing excisional procedures. *Int J Radiat Oncol Biol Phys.* 2012 Sep 1;84(1):e19-22.
36. Koom WS, Ahn SD, Song SY, Lee CG, Moon SH, Chie EK, Jang HS, Oh YT, Lee HS, Keum KC. Nutritional status of patients treated with radiotherapy as determined by subjective global assessment. *Radiat Oncol J.* 2012 Sep;30(3):132-9.
37. Chang JS, Lim JS, Noh SH, Hyung WJ, An JY, Lee YC, Rha SY, Lee CG, Koom WS. Patterns of regional recurrence after curative D2 resection for stage III (N3) gastric cancer: implications for postoperative radiotherapy. *Radiother Oncol.* 2012 Sep;104(3):367-73.

38. Chang JS, Wang ML, Koom WS, Yoon HI, Chung Y, Song SY, Seong J. High-dose helical tomotherapy with concurrent full-dose chemotherapy for locally advanced pancreatic cancer. *Int J Radiat Oncol Biol Phys.* 2012 Aug 1;83(5):1448-54.
39. Yoon HI, Koom WS, Lee IJ, Jeong K, Chung Y, Kim JK, Lee KS, Han KH, Seong J. The significance of ICG-R15 in predicting hepatic toxicity in patients receiving radiotherapy for hepatocellular carcinoma. *Liver Int.* 2012 Aug;32(7):1165-71.
40. You SH, Kim SY, Lee CG, Keum KC, Kim JH, Lee IJ, Kim YB, Koom WS, Cho J, Kim SK, Kim GE. Is there a clinical benefit to adaptive planning during tomotherapy in patients with head and neck cancer at risk for xerostomia? *Am J Clin Oncol.* 2012 Jun;35(3):261-6.
41. Koom WS, Choi Y, Shim SJ, Cha J, Seong J, Kim NK, Nam KC, Keum KC. Reirradiation to the pelvis for recurrent rectal cancer. *J Surg Oncol.* 2012 Jun 1;105(7):637-42.
42. Koom WS, Park SY, Kim W, Kim M, Kim JS, Kim H, Choi IK, Yun CO, Seong J. Combination of radiotherapy and adenovirus-mediated p53 gene therapy for MDM2-overexpressing hepatocellular carcinoma. *J Radiat Res.* 2012;53(2):202-10.
43. Cha J, Seong J, Keum KC, Lee CG, Koom WS. Comparison of elective inguinal node irradiation techniques in anal cancer. *Radiat Oncol J.* 2011 Dec;29(4):236-42.
44. Ahn SJ, An CS, Koom WS, Song HT, Suh JS. Correlations of 3T DCE-MRI quantitative parameters with microvessel density in a human-colorectal-cancer xenograft mouse model. *Korean J Radiol.* 2011 Nov-Dec;12(6):722-30.
Shin SJ, Yoon HI, Kim NK, Lee KY, Min BS, Ahn JB, Keum KC, Koom WS. Upfront systemic chemotherapy and preoperative short-course radiotherapy with delayed surgery for locally advanced rectal cancer with distant metastases. *Radiat Oncol.* 2011 Aug 24;6:99.
45. Lee IJ, Seong J, Koom WS, Kim YB, Jeon BC, Kim JH, Han KH. Selection of the optimal radiotherapy technique for locally advanced hepatocellular carcinoma. *Jpn J Clin Oncol.* 2011 Jul;41(7):882-9.
46. Kim W, Seong J, Oh HJ, Koom WS, Choi KJ, Yun CO. A novel combination treatment of armed oncolytic adenovirus expressing IL-12 and GM-CSF with radiotherapy in murine hepatocarcinoma. *J Radiat Res.* 2011;52(5):646-54.
47. Yeo SG, Kim DY, Kim TH, Chang HJ, Oh JH, Park W, Choi DH, Nam H, Kim JS, Cho MJ, Kim JH, Park JH, Kang MK, Koom WS, Kim JS, Nam TK, Chie EK, Kim JS, Lee KJ. Pathologic complete response of primary tumor following preoperative chemoradiotherapy for locally advanced rectal cancer: long-term outcomes and prognostic significance of pathologic nodal status (KROG 09-01). *Ann Surg.* 2010 Dec;252(6):998-1004.
48. Kim JW, Kim YB, Kim NK, Min BS, Shin SJ, Ahn JB, Koom WS, Seong J, Keum KC. The role of adjuvant pelvic radiotherapy in rectal cancer with synchronous liver metastasis: a retrospective study. *Radiat Oncol.* 2010 Aug 31;5:75.
49. Koom WS, Seong J, Han KH, Lee do Y, Lee JT. Is local radiotherapy still valuable for patients with multiple intrahepatic hepatocellular carcinomas? *Int J Radiat Oncol Biol Phys.* 2010 Aug 1;77(5):1433-40.

50. Shim SJ, Cha J, Koom WS, Kim GE, Lee CG, Choi EC, Keum KC. Clinical outcomes for T1-2N0-1 oral tongue cancer patients underwent surgery with and without postoperative radiotherapy. *Radiat Oncol*. 2010 May 27;5:43.
51. Oh H, Seong J, Kim W, Park S, Koom WS, Cho NH, Song M. Recombinant human epidermal growth factor (rhEGF) protects radiation-induced intestine injury in murine system. *J Radiat Res*. 2010;51(5):535-41.
52. Lee IJ, Koom WS, Lee CG, Kim YB, Yoo SW, Keum KC, Kim GE, Choi EC, Cha IH. Risk factors and dose-effect relationship for mandibular osteoradionecrosis in oral and oropharyngeal cancer patients. *Int J Radiat Oncol Biol Phys*. 2009 Nov 15;75(4):1084-91.
53. Cho KH, Ahn SJ, Pyo HR, Kim KS, Kim YC, Moon SH, Han JY, Kim HT, Koom WS, Lee JS. A Phase II study of synchronous three-dimensional conformal boost to the gross tumor volume for patients with unresectable Stage III non-small-cell lung cancer: results of Korean Radiation Oncology Group 0301 study. *Int J Radiat Oncol Biol Phys*. 2009 Aug 1;74(5):1397-404.
54. Kim S, Lee I, Kim YB, Koom WS, Jeon BC, Lee CG, Kim GE, Keum KC. A comparison of treatment plans using linac-based intensity-modulated radiation therapy and helical tomotherapy for maxillary sinus carcinoma. *Technol Cancer Res Treat*. 2009 Aug;8(4):257-63.
55. Koom WS, Seong J, Kim YB, Pyun HO, Song SY. CA 19-9 as a predictor for response and survival in advanced pancreatic cancer patients treated with chemoradiotherapy. *Int J Radiat Oncol Biol Phys*. 2009 Mar 15;73(4):1148-54.
56. Koom WS, Kim TH, Shin KH, Pyo HR, Kim JY, Kim DY, Yoon M, Park SY, Lee DH, Ryu JS, Jung YS, Lee SH, Cho KH. SMART (simultaneous modulated accelerated radiotherapy) for locally advanced nasopharyngeal carcinomas. *Head Neck*. 2008 Feb;30(2):159-69.
57. Yoon SM, Kim DY, Kim TH, Jung KH, Chang HJ, Koom WS, Lim SB, Choi HS, Jeong SY, Park JG. Clinical parameters predicting pathologic tumor response after preoperative chemoradiotherapy for rectal cancer. *Int J Radiat Oncol Biol Phys*. 2007 Nov 15;69(4):1167-72.
58. Koom WS, Sohn DK, Kim JY, Kim JW, Shin KH, Yoon SM, Kim DY, Yoon M, Shin D, Park SY, Cho KH. Computed tomography-based high-dose-rate intracavitary brachytherapy for uterine cervical cancer: preliminary demonstration of correlation between dose-volume parameters and rectal mucosal changes observed by flexible sigmoidoscopy. *Int J Radiat Oncol Biol Phys*. 2007 Aug 1;68(5):1446-54.
59. Shim SJ, Yang WI, Shin E, Koom WS, Kim YB, Cho JH, Suh CO, Kim JH, Kim GE. Clinical significance of cyclooxygenase-2 expression in extranodal natural killer (NK)/T-cell lymphoma, nasal type. *Int J Radiat Oncol Biol Phys*. 2007 Jan 1;67(1):31-8.
60. Keum KC, Chung EJ, Koom WS, Cho JH, Cho SH, Choi EC, Lee CG, Suh CO, Kim GE. Predictive value of p53 and PCNA expression for occult neck metastases in patients with clinically node-negative oral tongue cancer. *Otolaryngol Head Neck Surg*. 2006

Dec;135(6):858-64.

61. Keum KC, Suh YG, Koom WS, Cho JH, Shim SJ, Lee CG, Park CS, Chung WY, Kim GE. The role of postoperative external-beam radiotherapy in the management of patients with papillary thyroid cancer invading the trachea. *Int J Radiat Oncol Biol Phys.* 2006 Jun 1;65(2):474-80.
62. Seong J, Koom WS, Park HC. Radiotherapy for painful bone metastases from hepatocellular carcinoma. *Liver Int.* 2005 Apr;25(2):261-5.
63. Koom WS, Chung EJ, Yang WI, Shim SJ, Suh CO, Roh JK, Yoon JH, Kim GE. Angiocentric T-cell and NK/T-cell lymphomas: radiotherapeutic viewpoints. *Int J Radiat Oncol Biol Phys.* 2004 Jul 15;59(4):1127-37.
64. Kim GE, Koom WS, Yang WI, Lee SW, Keum KC, Lee CG, Suh CO, Hahn JS, Roh JK, Kim JH. Clinical relevance of three subtypes of primary sinonasal lymphoma characterized by immunophenotypic analysis. *Head Neck.* 2004 Jul;26(7):584-93.
65. Kim GE, Kim YB, Cho NH, Chung HC, Pyo HR, Lee JD, Park TK, Koom WS, Chun M, Suh CO. Synchronous coexpression of epidermal growth factor receptor and cyclooxygenase-2 in carcinomas of the uterine cervix: a potential predictor of poor survival. *Clin Cancer Res.* 2004 Feb 15;10(4):1366-74.
66. Kim YB, Chang SK, Yang WI, Hahn JS, Koom WS, Shim SJ, Park W, Lee KK, Suh CO, Kim GE. Primary NK/T cell lymphoma of the testis. A case report and review of the literature. *Acta Haematol.* 2003;109(2):95-100.