

## **CURRICULUM VITAE**

### **PERSONAL INFORMATION**

FAMILY NAME : HYUNG,  
GIVEN NAME : WOO JIN  
NAME IN FULL : Woo Jin Hyung, MD, PhD

### **EDUCATION**

2003-2006 Korea University, Graduate School, Seoul, Korea; PhD  
2001-2003 Yonsei University, Graduate School, Seoul, Korea; BS  
1988-1993 Yonsei University, College of Medicine, Seoul, Korea; MD  
1986-1988 Yonsei University, Pre-medicine Program

### **POSTDOCTORAL TRAINING**

2001-2002 Fellow, Department of Surgery, Severance Hospital,  
Yonsei University, Seoul, Korea  
1994-1998 Resident, Department of Surgery, Severance Hospital,  
Yonsei University, Seoul, Korea  
1992-1993 Internship, Severance Hospital, Yonsei University, Seoul, Korea

### **HOSPITAL/ACADEMIC APPOINTMENTS**

2014.3. - present : Director; Gastric Cancer Center, Yonsei Cancer Center,  
Yonsei University Health System  
2014.3. - present : Chief; Division of Gastrointestinal Surgery,  
Department of Surgery, Severance Hospital,  
Yonsei University Health System  
2013.3. - present : Professor; Department of Surgery,  
Yonsei University College of Medicine  
2011.3. - 2013.2.: Director; Robot & MIS Center, Severance Hospital,  
Yonsei University Health System  
2008.3. - 2013.2.: Associate Professor; Department of Surgery, Yonsei University  
2004.3. - 2008.2.: Assistant Professor; Department of Surgery, Yonsei University  
2003.3. - 2004.2.: Instructor; Department of Surgery, Yonsei University

### **SPECIALIZED FIELD**

Upper gastrointestinal surgery, Surgical oncology especially for Gastric Cancer  
Minimally invasive upper gastrointestinal surgery, (Laparoscopy and robot)  
Image-guided surgery

**PEER-REVIEWED SCI(E) PUBLICATIONS**

**(Total 73 publications as a 1st or corresponding author)**

1. Kwon IG, Son T, Kim HI, **Hyung WJ**. Fluorescent lymphography–guided lymphadenectomy during robotic radical gastrectomy for gastric cancer. JAMA Surgery. 2018 Nov 14. [Epub ahead of print] **(Corresponding Author)**
2. Cho M, Son T, Kim HI, Noh SH, Choi S, Seo WJ, Roh CK, **Hyung WJ**. Similar hematologic and nutritional outcomes after proximal gastrectomy with double-tract reconstruction in comparison to total gastrectomy for early upper gastric cancer. Surg Endosc. 2018 Sep 10. [Epub ahead of print]
3. **Hyung WJ**, Yang HK, Han SU, Lee YJ, Park JM, Kim JJ, Kwon OK, Kong SH, Kim HI, Lee HJ, Kim W, Ryu SW, Jin SH, Oh SJ, Ryu KW, Kim MC, Ahn HS, Park YK, Kim YH, Hwang SH, Kim JW, Cho GS. A feasibility study of laparoscopic total gastrectomy for clinical stage I gastric cancer: a prospective multi-center phase II clinical trial, KLASS 03. Gastric Cancer. 2018 Aug 20.
4. Cho I, Son Y, Song S, Bae YJ, Kim YN, Kim HI, Lee DT, Hyung WJ. Feasibility and Effects of a Postoperative Recovery Exercise Program Developed Specifically for Gastric Cancer Patients (PREP-GC) Undergoing Minimally Invasive Gastrectomy. J Gastric Cancer. 2018 Jun;18(2):118-133. **(Corresponding Author)**
5. Obama K, Kim YM, Kang DR, Son T, Kim HI, Noh SH, **Hyung WJ**. Long-term oncologic outcomes of robotic gastrectomy for gastric cancer compared with laparoscopic gastrectomy. Gastric Cancer. 2018 Mar;21(2):285-295. **(Corresponding Author)**
6. Woo Y, Goldner B, Son T, Song K, Noh SH, Fong Y, **Hyung WJ**. Western Validation of a Novel Gastric Cancer Prognosis Prediction Model in US Gastric Cancer Patients. J Am Coll Surg. 2018 Mar;226(3):252-258. **(Corresponding Author)**
7. Alhossaini R, **Hyung WJ**. Robotic Assisted Distal Gastrectomy for Gastric Cancer in a Patient with Situs Inversus Totalis: with Video. J Gastrointest Surg. 2017 Dec;21(12):2144-2145.
8. Lee JH, Tanaka E, Woo Y, Guner A, Son T, Kim HI, Lim JS, **Hyung WJ**. Advanced real-time multi-display educational system (ARMES): An innovative real-time audiovisual mentoring tool for complex robotic surgery. J Surg Oncol. 2017 Dec;116(7):894-897. **(Corresponding Author)**
9. Guner A, Cho M, Son T, Kim HI, Noh SH, **Hyung WJ**. Improved glycemic control with proximal intestinal bypass and weight loss following gastrectomy

- in non-obese diabetic gastric cancer patients. *Oncotarget*. 2017 Nov 1;8(61):104605-104614. **(Corresponding Author)**
10. Alhossaini RM, Altamran AA, Seo WJ, **Hyung WJ**. Robotic gastrectomy for gastric cancer: Current evidence. *Ann Gastroenterol Surg*. 2017 Jul 28;1(2):82–89. **(Corresponding Author)**
  11. Son T, Kwon IG, Lee JH, Choi YY, Kim HI, Cheong JH, Noh SH, **Hyung WJ**. Impact of splenic hilar lymph node metastasis on prognosis in patients with advanced gastric cancer. *Oncotarget*. 2017 Jun 28;8(48):84515-84528. **(Corresponding Author)**
  12. Cho I, Kwon IG, Guner A, Son T, Kim HI, Kang DR, Noh SH, Lim JS, **Hyung WJ**. Consideration of Clinicopathologic Features Improves Patient stratification for Multimodal Treatment of Gastric Cancer. *Oncotarget*. 2017 Jun 22; 8(45):79594-79603. **(Corresponding Author)**
  13. Chon HJ, **Hyung WJ**, Kim C, Park S, Kim JH, Park CH, Ahn JB, Kim H, Chung HC, Rha SY, Noh SH, Jeung HC. Differential Prognostic Implications of Gastric Signet Ring Cell Carcinoma: Stage Adjusted Analysis from a Single High-volume Center in Asia. *Ann Surg*. 2017 May;265(5):946-953. **(Co-first Author)**
  14. Woo Y, Goldner B, Ituarte P, Lee B, Melstrom L, Son T, Noh SH, Fong Y, **Hyung WJ**. Lymphadenectomy with Optimum of 29 Lymph Nodes Retrieved Associated with Improved Survival in Advanced Gastric Cancer: A 25,000 Patient International Database Study. *J Am Coll Surg*. 2017 Apr;224(4):546-555. **(Corresponding Author)**
  15. Chang JS, Kim KH, Keum KC, Noh SH, Lim JS, Kim HS, Rha SY, Lee YC, **Hyung WJ**, Koom WS. Recursive partition analysis of peritoneal and systemic recurrence in patients with gastric cancer who underwent D2 gastrectomy: Implications for neoadjuvant therapy consideration. *J Surg Oncol*. 2016 Dec;114(7):859-864. **(Co-Corresponding Author)**
  16. Okumura N, Son T, Kim YM, Kim HI, An JY, Noh SH, **Hyung WJ**. Robotic gastrectomy for elderly gastric cancer patients: comparisons with robotic gastrectomy in younger patients and laparoscopic gastrectomy in the elderly. *Gastric Cancer*. 2016 Oct;19(4):1125-34. **(Corresponding Author)**
  17. Kim YM, Son T, Kim HI, Noh SH, **Hyung WJ**. Robotic D2 Lymph Node Dissection during Distal Subtotal Gastrectomy for Gastric Cancer: Toward Procedural Standardization. *Ann Surg Oncol*. 2016 Aug;23(8):2409-10. **(Corresponding Author)**

18. Woo Y, Soon T, Song K, Okumura N, Hu Y, Cho GS, An JY, Kim JW, Choi SH, Noh SH, **Hyung WJ**. A novel prediction model of prognosis after gastrectomy for gastric carcinoma: Development and validation using Asian databases. *Ann Surg*. 2016 Jul;264(1):114-20. **(Corresponding Author)**
19. Guner A, Son T, Cho I, Kwon IG, An JY, Kim HI, Cheong JH, Noh SH, **Hyung WJ**. Liver-directed treatments for liver metastasis from gastric adenocarcinoma: comparison between liver resection and radiofrequency ablation. *Gastric Cancer*. 2016 Jul;19(3):951-60. **(Corresponding Author)**
20. Yang K, Bang HJ, Almadani ME, Dy-Abalajon DM, Kim YN, Roh KH, Lim SH, Son T, Kim HI, Noh SH, **Hyung WJ**. Laparoscopic proximal gastrectomy with double-tract reconstruction by intracorporeal anastomosis with linear staplers. *J Am Coll Surg*. 2016 May;222(5):e39-45. **(Corresponding Author)**
21. Son T, **Hyung WJ**. Laparoscopic gastric cancer surgery: Current evidence and future perspectives. *World J Gastroenterol*. 2016 Jan 14;22(2):727-35 **(Corresponding Author)**
22. Kim HI, Han SU, Yang HK, Kim YW, Lee HJ, Ryu KW, Park An JM, JY, Kim MC, Park S, Song KY, Oh SJ, Kong SH, Suh BJ, Yang DH, Ha TK, Kim YN, **Hyung WJ**. Multicenter prospective comparative study of robotic versus laparoscopic gastrectomy for gastric adenocarcinoma. *Ann Surg*. 2016 Jan;263(1):103-9. **(Corresponding Author)**
23. Lee J, Kim YM, Woo Y, Obama K, Noh SH, **Hyung WJ**. Robotic distal subtotal gastrectomy with D2 lymphadenectomy for gastric cancer patients with high body mass index: Comparison with conventional laparoscopic distal subtotal gastrectomy with D2 lymphadenectomy. *Surg Endosc*. 2015 Nov;29(11):3251-60. **(Corresponding Author)**
24. Son T, **Hyung WJ**. Robotic gastrectomy for gastric cancer. *J Surg Oncol*. 2015 Sep;112(3):271-8. **(Corresponding Author)**
25. Kwon IG, Cho I, Guner A, Kim HI, Noh SH, **Hyung WJ**. Minimally invasive surgery as a treatment option for gastric cancer in the elderly: comparison with open surgery for patients 80 years and older. *Surg Endosc*. 2015 Aug;29(8):2321-30. **(Corresponding Author)**
26. Tanaka E, Kim M, Lim JS, Choi YY, Saklani A, Noh SH, **Hyung WJ**. Usefulness of Laparoscopic Side-to-Side Duodenojejunostomy for Gastrointestinal Stromal Tumors Located at the Duodenojejunal Junction. *J Gastrointest Surg*. 2015 Feb;19(2):313-8. **(Corresponding Author)**
27. Kim HI, Park MS, Song KJ, Woo Y, **Hyung WJ**. Rapid and safe learning of robotic gastrectomy for gastric cancer: Multidimensional analysis in a

- comparison with laparoscopic gastrectomy. *Eur J Surg Oncol*. 2014 Oct;40(10):1346-54. **(Corresponding Author)**
28. Son T, Lee JH, Kim YM, Kim HI, Noh SH, **Hyung WJ**. Robotic spleen-preserving total gastrectomy for gastric cancer: comparison with conventional laparoscopic procedure. *Surg Endosc*. 2014 Sep;28(9):2606-15. **(Corresponding Author)**
29. Kwon IG, Cho I, Guner A, Choi YY, Shin HB, Kim HI, An JY, Cheong JH, Noh SH, **Hyung WJ**. Minimally invasive surgery for remnant gastric cancer: a comparison with open surgery. *Surg Endosc*. 2014 Aug;28(8):2452-8. **(Corresponding Author)**
30. Son T, Kwon IG, **Hyung WJ**. Minimally invasive surgery for gastric cancer treatment: current status and future perspectives. *Gut Liver*. 2014 May;8(3):229-36. **(Corresponding Author)**
31. Kim HI, Hur H, Kim YN, Lee HJ, Kim MC, Han SU, **Hyung WJ**. Standardization of D2 lymphadenectomy and surgical quality control (KLASS-02-QC): a prospective, observational, multicenter study [NCT01283893]. *BMC Cancer*. 2014 Mar 19;14:209. **(Corresponding Author)**
32. Woo Y, Choi GH, Min BS, **Hyung WJ**. Novel application of simultaneous multi-image display during complex robotic abdominal procedures. *BMC Surg*. 2014 Mar 15;14(1):13 **(Corresponding Author)**
33. Son T, **Hyung WJ**, Kim JW, Kim HI, An JY, Cheong JH, Choi SH, Noh SH. Atomic Extent of Metastatic Lymph Nodes: Still Important for Gastric Cancer Prognosis. *Ann Surg Oncol*. 2014 Mar;21(3):899-907. **(Corresponding Author)**
34. Son T, **Hyung WJ**, Lee JH, Kim YM, Noh SH. Minimally invasive surgery for serosa-positive gastric cancer (pT4a) in patients with preoperative diagnosis of cancer without serosal invasion. *Surg Endosc*. 2014 Mar;28(3):866-74. **(Corresponding Author)**
35. Hu Y, Kim HI, **Hyung WJ**, Song KJ, Lee JH, Kim YM, Noh SH. Vitamin B12 Deficiency After Gastrectomy for Gastric Cancer: An Analysis of Clinical Patterns and Risk Factors. *Ann Surg*. 2013 Dec;258(6):970-5. **(Corresponding Author)**
36. Lee JH, **Hyung WJ**, Kim HI, Kim YM, Son T, Okumura N, Hu Y, Kim CB, Noh SH. Method of Reconstruction Governs Iron Metabolism after Gastrectomy for Gastric Cancer Patients. *Ann Surg* 2013 Dec;258(6):964-9.
37. Kim YM, Baek SE, Lim JS, **Hyung WJ**. Clinical Application of Image-Enhanced Minimally Invasive Robotic Surgery for Gastric Cancer: A

- Prospective Observational Study. *J Gastrointest Surg.* 2013 Feb;17(2):304-12. **(Corresponding Author)**
38. Kim HI, Cho I, Jang DS, **Hyung WJ**. Intracorporeal Esophagojejunostomy Using a Circular Stapler with a New Purse-String Suture Technique during Laparoscopic Total Gastrectomy. *J Am Coll Surg.* 2013 Feb;216(2):e11-6. **(Corresponding Author)**
39. Lim JS, Choi J, Song J, Chung YE, Lee SK, **Hyung WJ**. Nanoscale iodized oil emulsion: a useful tracer for pretreatment sentinel node detection using CT-lymphography in a normal canine gastric model. *Surg Endosc.* 2012 Aug;26(8):2267-74. **(Corresponding Author)**
40. Woo Y, **Hyung WJ**, Pak KH, Obama K, Noh SH. Successful cholecystectomy during robotic gastrectomy. *Minim Invasive Ther Allied Technol.* 2012 Jul;21(4):276-81. **(Corresponding Author)**
41. Woo Y, **Hyung WJ**, Obama K, Kim HI, Pak KH, Son T, Noh SH. Elevated high-sensitivity C-reactive protein, a marker of advanced stage gastric cancer and postgastrectomy disease recurrence. *J Surg Oncol.* 2012 Mar 15;105(4):405-9. **(Corresponding Author)**
42. Kim HI, Woo Y, **Hyung WJ**. Laparoscopic distal gastrectomy with an intracorporeal gastroduodenostomy using a circular stapler. *J Am Coll Surg.* 2012 Jan;214(1):e7-13. **(Corresponding Author)**
43. Pak KH, **Hyung WJ**, Son T, Obama K, Woo Y, Kim HI, An JY, Kim JW, Cheong JH, Choi SH, Noh SH. Long-term oncologic outcomes of 714 consecutive laparoscopic gastrectomies for gastric cancer: results from the 7-year experience of a single institute. *Surg Endosc.* 2012 Jan;26(1):130-6. **(Corresponding Author)**
44. Park SS, Kim MC, Park MS, **Hyung WJ**. Rapid adaptation of robotic gastrectomy for gastric cancer by experienced laparoscopic surgeons. *Surg Endosc.* 2012 Jan;26(1):60-7. **(Corresponding Author)**
45. Woo Y, **Hyung WJ**, Kim HI, Obama K, Son T, Noh SH. Minimizing hepatic trauma with a novel liver retraction method: a simple liver suspension using gauze suture. *Surg Endosc.* 2011 Dec;25(12):3939-45. **(Corresponding Author)**
46. Kim HI, **Hyung WJ**, Song KJ, Choi SH, Kim CB, Noh SH. Oral Vitamin B12 replacement: An effective treatment for Vitamin B12 deficiency after total gastrectomy in gastric cancer patients. *Ann Surg Oncol.* 2011 Dec;18(13):3711-7. **(Corresponding Author)**

47. Woo Y, **Hyung WJ**, Pak KH, Inaba K, Obama K, Choi SH, Noh SH. Robotic gastrectomy as an oncologically sound alternative to laparoscopic resections for the treatment of early-stage gastric cancers. *Arch Surg.* 2011 Sep;146(9):1086-92. **(Corresponding Author)**
48. Kim HI, **Hyung WJ**, Lee CR, Lim JS, An JY, Cheong JH, Choi SH, Noh SH. Intraoperative portable abdominal radiograph for tumor localization: a simple and accurate method for laparoscopic gastrectomy. *Surg Endosc.* 2011 Mar;25(3):958-63. **(Corresponding Author)**
49. Lim JS, Lee SK, **Hyung WJ**, Choi JY, Kim MJ, Noh SH, Kim KW. CT colonography for postoperative surveillance after curative gastrectomy in patients with gastric cancer. *J Surg Oncol.* 2010 Nov 1;102(6):593-8. **(Corresponding Author)**
50. Song J, Lee HJ, Cho GS, Han SU, Kim MC, Ryu SW, Kim W, Song KY, Kim HH, Hyung WJ; Korean Laparoscopic Gastrointestinal Surgery Study (KLASS) Group. Recurrence following laparoscopy-assisted gastrectomy for gastric cancer: a multicenter retrospective analysis of 1,417 patients. *Ann Surg Oncol.* 2010 Jul;17(7):1777-86. **(Corresponding Author)**
51. An JY, Heo GU, Cheong JH, **Hyung WJ**, Choi SH, Noh SH. Assessment of Open versus Laparoscopy-Assisted Gastrectomy in Lymph Node-Positive Early Gastric Cancer: A Retrospective Cohort Analysis. *J Surg Oncol.* 2010 Jul 1;102(1):77-81. **(Corresponding Author)**
52. **Hyung WJ**, Kim YS, Lim JS, Kim MJ, Noh SH, Kim KW. Preoperative imaging of sentinel lymph nodes in gastric cancer using CT lymphography. *Yonsei Med J.* 2010 May;51(3):407-13.
53. Song J, Kim JY, Kim S, Choi WH, Cheong JH, **Hyung WJ**, Choi SH, Noh SH. Laparoscopic completion total gastrectomy in remnant gastric cancer: technical detail and experience of two cases. *Hepatogastroenterology.* 2009 Jul-Aug;56(93):1249-52. **(Corresponding Author)**
54. Song J, Oh SJ, Kang WH, **Hyung WJ**, Choi SH, Noh SH. Robot-assisted gastrectomy with lymph node dissection for gastric cancer: Lessons learned from initial 100 consecutive procedures. *Ann Surg.* 2009 Jun;249(6):927-32. **(Corresponding Author)**
55. Song J, Kang WH, Oh SJ, **Hyung WJ**, Choi SH, Noh SH. Role of robotic gastrectomy using da Vinci system found by comparison with laparoscopic gastrectomy - Initial experience of consecutive 20 cases. *Surg Endosc.* 2009 Jun;23(6):1204-11. **(Corresponding Author)**

56. Kim SM, Song J, Oh SJ, **Hyung WJ**, Choi SH, Noh SH. Comparison of laparoscopic truncal vagotomy with gastrojejunostomy and open surgery in peptic pyloric stenosis. *Surg Endosc*. 2009 Jun;23(6):1326-30. **(Corresponding Author)**
57. Kim MC, Kim W, Kim HH, Ryu SW, Ryu SY, Song KY, Lee HJ, Cho GS, Han SU, **Hyung WJ**; Korean Laparoscopic Gastrointestinal Surgery Study (KLASS) Group. Risk Factors Associated with Complication Following Laparoscopy-Assisted Gastrectomy for Gastric Cancer: A Large-Scale Korean Multicenter Study. *Ann Surg Oncol*. 2008 Oct;15(10):2692-2700. **(Corresponding Author)**
58. **Hyung WJ**, Lim JS, Song J, Choi SH, Noh SH. Laparoscopic spleen-preserving splenic hilar lymph node dissection during total gastrectomy for gastric cancer. *J Am Coll Surg* 2008 Aug;207(2):e6-11.
59. **Hyung WJ**, Kim S, Choi WH, Cheong JH, Choi SH, Kim CB, Noh SH. Changes in treatment outcomes of gastric cancer surgery over 45 years at a single institution. *Yonsei Med J*. 2008 Jun 30;49(3):409-15.
60. **Hyung WJ**, Lim JS, Kim TI, Kim WH, Noh SH. Minimally invasive treatment of obscure gastrointestinal bleeding using laparoscopic ultrasonography. *Surg Laparosc Endosc Percutan Tech*. 2007;17(4):325-27.
61. Lim JS, **Hyung WJ**, Park MS, Kim MJ, Noh SH, Kim KW. Imaging-Guided Minimally Invasive Laparoscopic Resection of Intraluminal Small-Bowel Tumor: Report of Two Cases. *AJR Am J Roentgenol*. 2007;189(1):56-60. **(Corresponding Author)**
62. **Hyung WJ**, Song C, Cheong JH, Choi SH, Noh SH. Factors influencing operation time of laparoscopy-assisted distal subtotal gastrectomy: Analysis of consecutive 100 initial cases. *Eur J Surg Oncol*. 2007 Apr;33(3):314-319.
63. **Hyung WJ**, Song C, Cheong JH, Choi SH, Noh SH. Percutaneous needle decompression during laparoscopic gastric surgery: a simple alternative to nasogastric decompression. *Yonsei Med J*. 2005 Oct 31;46(5):648-51.
64. **Hyung WJ**, Lim JS, Cheong JH, Kim J, Choi SH, Song SY, Noh SH. Intraoperative tumor localization using laparoscopic ultrasonography in laparoscopic-assisted gastrectomy. *Surg Endosc*. 2005 Oct;19(10):1353-7.
65. **Hyung WJ**, Lim JS, Cheong JH, Kim J, Choi SH, Noh SH. Laparoscopic resection of a huge intraluminal gastric submucosal tumor located in the anterior wall; Eversion method. *J Surg Oncol*. 2005 Feb 1;89(2):95-8.
66. **Hyung WJ**, Lim JS, Cheong JH, Lee YC, Noh SH. Tumor localization using laparoscopic ultrasound for a small submucosal tumor. *J Surg Oncol*. 2004 Jun 1;86(3):164-6.



67. **Hyung WJ**, Cheong JH, Kim J, Chen J, Choi SH, Noh SH. Application of minimally invasive treatment for early gastric cancer. *J Surg Oncol*. 2004 Mar 15;85(4):181-6.
68. **Hyung WJ**, Lee JH, Choi SH, Min JS, Noh SH. Prognostic impact of lymphatic and/or blood vessel invasion in patients with node-negative advanced gastric cancer. *Ann Surg Oncol*. 2002 Jul;9(6):562-7.
69. **Hyung WJ**, Noh SH, Yoo CH, Huh JH, Shin DW, Lah KH, Lee JH, Choi SH, Min JS. Prognostic significance of metastatic lymph node ratio in T3 gastric cancer. *World J Surg*. 2002 Mar;26(3):323-9.
70. **Hyung WJ**, Noh SH, Shin DW, Huh J, Huh BJ, Choi SH, Min JS. Adverse effects of perioperative transfusion on patients with stage III and IV gastric cancer. *Ann Surg Oncol*. 2002 Jan-Feb;9(1):5-12.
71. **Hyung WJ**, Noh SH, Lee JH, Huh JJ, Lah KH, Choi SH, Min JS. Early gastric carcinoma with signet ring cell histology. *Cancer*. 2002 Jan 1;94(1):78-83.
72. **Hyung WJ**, Lee JH, Lah KH, Noh SH. Intraoperative needle decompression: a simple alternative to nasogastric decompression. *J Surg Oncol*. 2001 Aug;77(4):277-9.
73. **Hyung WJ**, Noh SH, Shin DW, Yoo CH, Kim CB, Min JS, Lee KS. Clinicopathologic characteristics of mucinous gastric adenocarcinoma. *Yonsei Med J*. 1999 Apr;40(2):99-106.