

A Case of Recurred Gastric Cancer in 12 Years after Surgical Resection

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1. Case presentation

50세 남자가 검진 대장내시경 검사에서 이상 소견이 발견되어 내원하였다. 내원 12년 전 위암(Borrmann type 3)으로 Radical subtotal gastrectomy with Roux en Y을 받았고, 3기(T3N1M0, 림프절 전이: 5/25)로 진단되었다. 수술 후 5-fluorouracil이 포함된 항암화학요법 치료를 받았고, 3년동안 주기적인 위내시경 검사 및 복부 검사를 받았다. 이후로는 연고지 근처의 병원에서 정기 검진을 받으며 지냈고, 내원 한달 전 시행한 검진 목적의 대장내시경 검사에서 횡행결장의 이상 소견으로 본원으로 전원되었다.

2. Diagnosis

위내시경 검사에서 수술 흔적 이외에 특이 소견은 관찰되지 않았고, 대장내시경 검사에서 항문연 상방 60 cm 위치의 횡행 결장에서 관장의 협착과 함께 발적 및 점막의 변화 소견이 관찰되었고, 대장 내시경으로는 좁아진 관장 부위를 통과할 수 없었다. 조직 검사와 결핵균 검사를 시행한 후 내시경을 회수하였다. 조직 검사 및 배양에서 결핵균의 증거는 관찰되지 않았고, 협착부위에서 시행한 조직 검사는 Signet-ring cell carcinoma이 확인되었다. 추가 면역 염색(pan-cytokeratin, p53)에서 재발성 또는 전이성 병변으로 확인되었다. PET CT에서도 횡행결장의 uptake 증가 관찰되었으며, 복부 CT에서 횡행 결장의 불규칙한 장관벽 조영 증강과 장관 주위로의 침윤 소견이 확인되었고, 그 외 복부 임파선 종대 및 원격 전이 소견은 관찰되지 않았다.

3. Therapy and Clinical course

확진 및 치료를 위해 외과로 전과하여 Open extended right hemicolectomy를 시행하였다. 절제한 조직에서 signet-ring cell carcinoma가 확인되었고, 암세포는 주변 조직으로의 침윤 소견을 보였으며 림프절 전이는 없었다(T3N0M0). 환자는 수술 후 항암화학요법(FOLFOX4)을 추가적으로 받고 있으며 전신상태가 양호하여 외래 추적 관찰 중이다.

4. Conclusion

아직까지 위암 수술 후 정기적인 검사의 종류나 기간에 따른 장기 생존자에 대한 연구는 많지 않다. 따라서 위암 수술 후 장기 생존자의 재발 여부에 대한 보다 많은 연구가 필요할 것으로 생각된다. 저자들은 최근 수술 후 12년 만에 재발된 위암 환자를 경험하여 보고하는 바이다.

Key Words: Advanced gastric cancer, Recurrence

REFERENCES

1. Jung KW, Won YJ, Oh CM, Kong HJ, Lee DH, Lee KH. Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2014. *Cancer Res Treat* 2017;49:292-305.
2. Janunger KG, Hafstrom L, Nygren P, Glimelius B. A systematic overview of chemotherapy effects in gastric cancer. *Acta Oncol* 2001;40:309-326.
3. Shiraishi N, Inomata M, Osawa N, Yasuda K, Adachi Y, Kitano S. Early and late recurrence after gastrectomy for gastric carcinoma. Univariate and multivariate analyses. *Cancer* 2000;89:255-261.

Case Presentation

- 50/M
- CC : Further evaluation and proper Treatment
- Present illness
- 내원 12년 전 위암 stage IIIB (Borrmann type 3, pT4aN2M0, 림프절 전이: 5/25)로 Radical subtotal gastrectomy with Roux en Y 및 5-FU 포함된 항암화학요법 치료를 받고 정기 검진 받으며 지내옴. 내원 한달 전 시행한 검진 목적의 대장내시경 검사에서 횡행결장의 협착, 발적, 부종으로 본원으로 전원됨.

Subtotal gastrectomy

Advanced gastric carcinoma

1. Location: middle third, lower third, **body**, lesser curvature, greater curvature, anterior wall
2. Gross type: Borrmann type 3
3. Histologic type: tubular adenocarcinoma, **poorly** differentiated
4. Histologic type by Lauren: **diffuse**
5. Size: **11.0 x 9.0 cm**
6. Depth of invasion: **penetrates serosa**
7. Resection margin: (safety margin: distal 2.5 cm, proximal 1.5 cm)
8. Lymph node metastasis: metastasis to out of regional lymph nodes
--- 2(0/2), 3(1/2), 4(3/6), 4s(0/0), 5(0/0), 6(0/5), 7(1/2), 8(0/1), 11(0/0), 12p(0/1), 14(0/2), 15(0/1), 16(0/2)
9. **Lymphatic/Venous/Perineural** invasion(+/-/+)

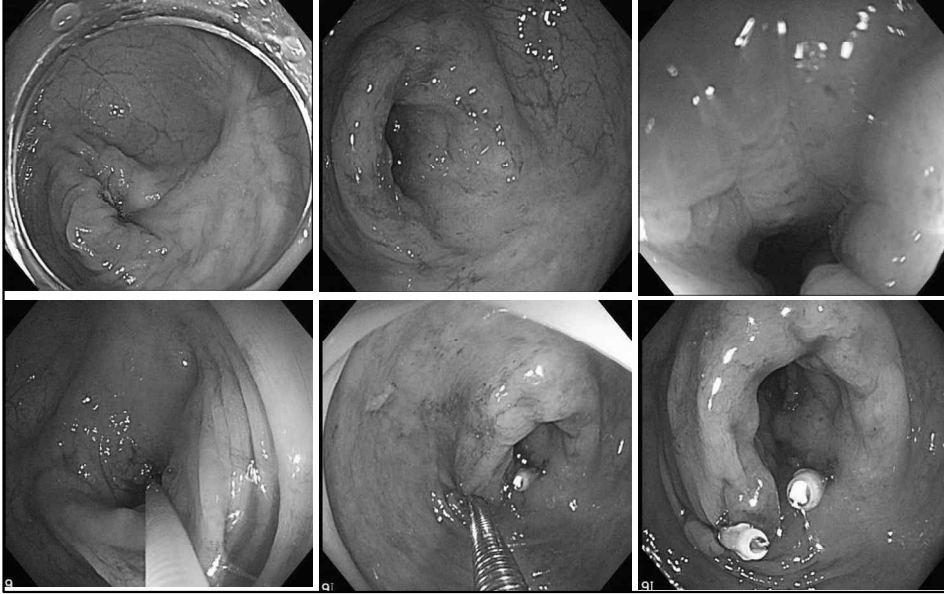
Case Presentation

- **Past medical history**
 - DM/HTN/Tbc/Hepatitis (-/-/-/+): 1999년 HBV 진단.
 - Pre Op. Hx: 2005년 9월 Radical subtotal gastrectomy with Roux en Y
- **Social history**
 - Smoking : non-smoker
 - Alcohol : 맥주1병, 3회/주, 30년
- **Family Hx.**
 - 형이 백혈병으로 치료받음

Initial laboratory results

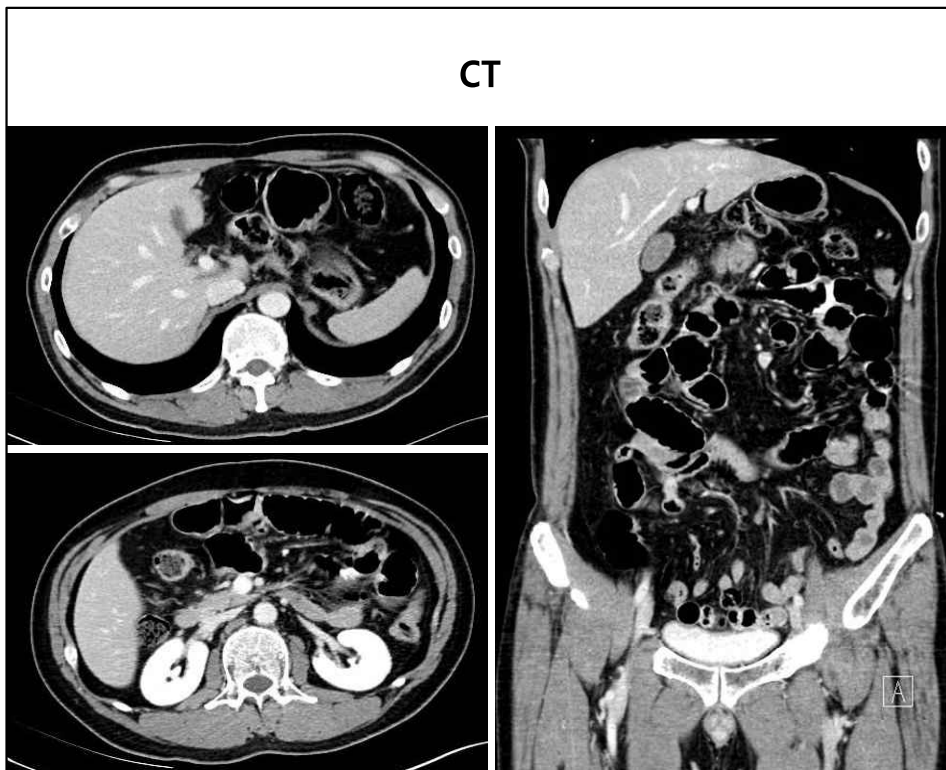
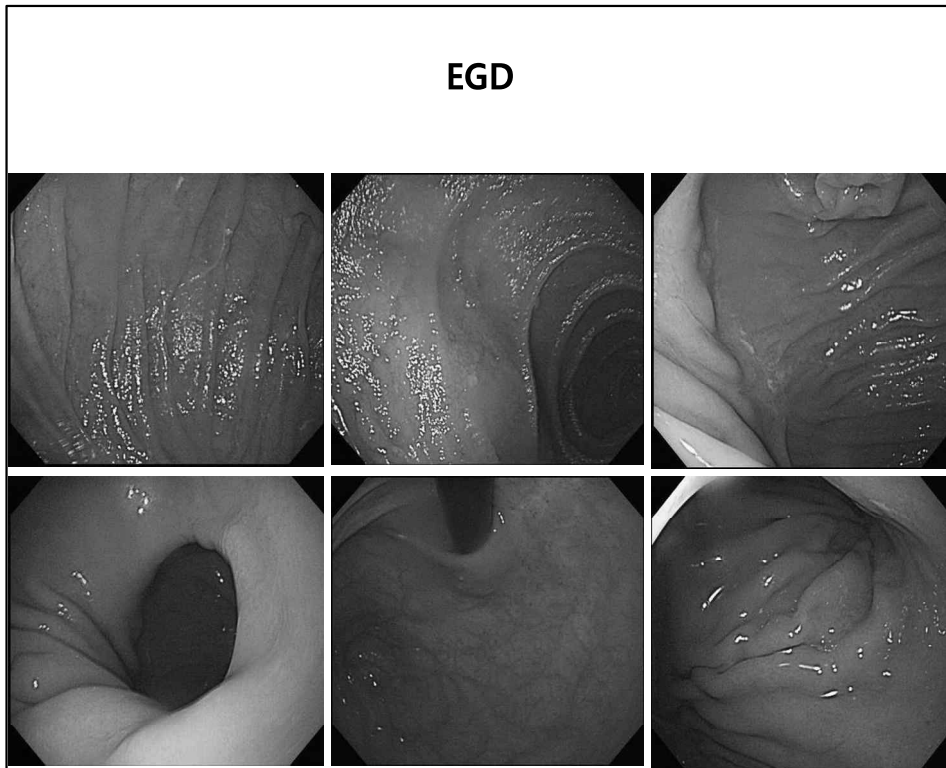
- CBC
 - WBC 3,230/uL, Hb 11.4 g/dL, platelet 185,000/uL
- Chemistry
 - BUN/Cr 12.5/1.16 mg/dL, Na/K 138.8/4.67 meq/L, protein 7.0 gm/dL, Albumin 4.4 g/dL, AST/ALT 31/29 IU/L
- Tumor marker
 - CEA 1.66 ng/mL, CA19-9 10.32U/mL

Colonoscopy

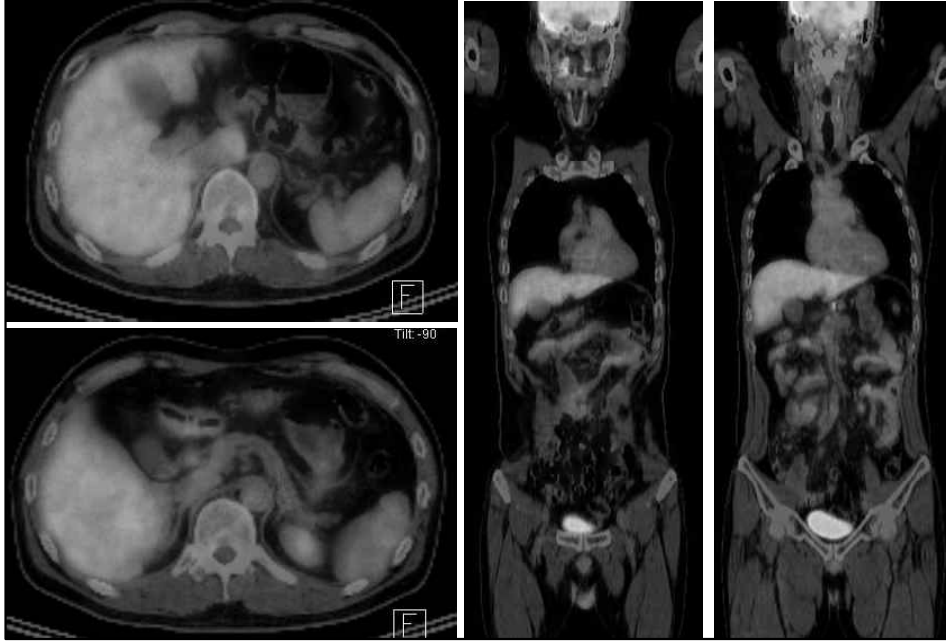


Colonoscopic Biopsy

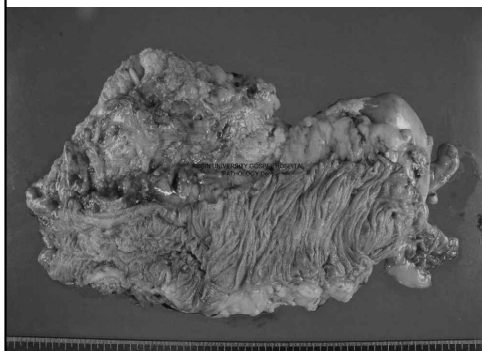
- **Biopsy Report**
 - Colon, 60cm from AV, endoscopic biopsy
 - **Signet-ring cell carcinoma, recurrent and invasive**
 - There are numerous signet-ring cells in the lamina propria, which are confirmed by **pan-cytokeratin and p53** immunostaining.
 - AFB stain, TB-PCR : negative



PET



Extended right hemicolectomy



Adenocarcinoma, signet ring cell type,
probably metastatic, in the
subserosa to mucosa

1. Size: 7.0 x 4.0 x 0.7 cm
2. Location: transverse colon
3. Lymphovascular invasion: present
4. Perineural invasion: not identified
5. Pericolic lymph node: negative for malignancy
--- pericolic (0/21)
6. Appendix: mild acute appendicitis

Clinical course

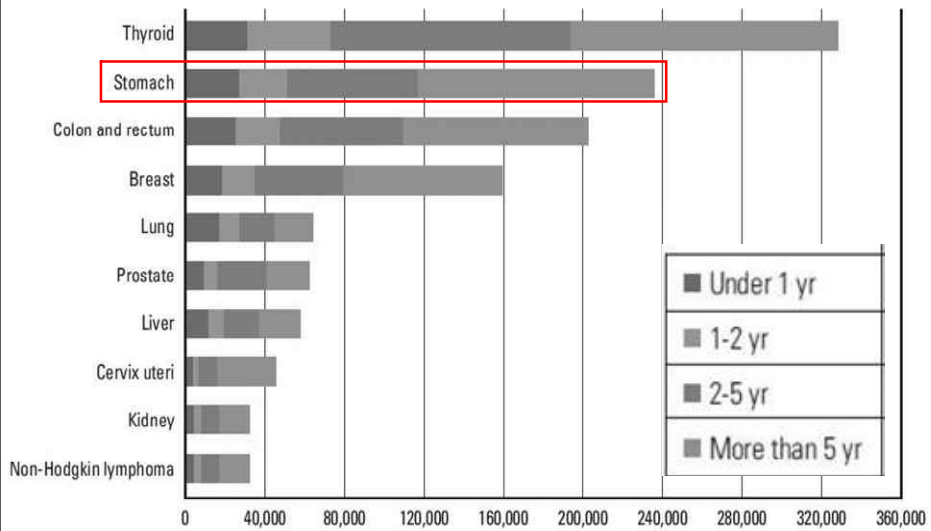
- 2017.5.17: palliative 1st FOLFOX
- 2017.5.31: palliative 2nd FOLFOX
- 2017.6.16: palliative 3rd FOLFOX



Review

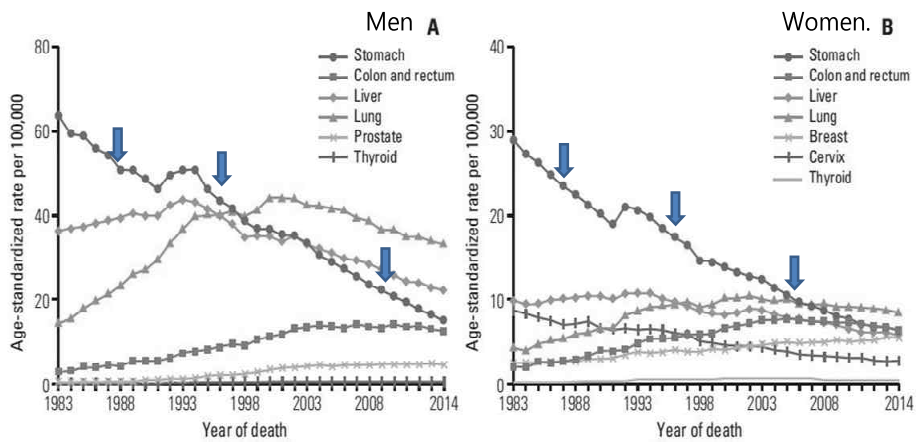
**Recurrence
after gastrectomy for gastric cancer**

Prevalence by time period after cancer diagnosis



Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2014. Cancer Res Treat 2017;49:292-305

Cancer mortalities



Cancer Statistics in Korea: Incidence, Mortality, Survival, and Prevalence in 2014. Cancer Res Treat 2017;49:292-305

- More recent studies have shown that the **overall 5-year survival rate of gastric cancer has improved** because of curative gastrectomy with chemotherapy.
- However, death from gastric cancer is almost entirely caused by **recurrent** diseases.

Cancer

Volume 89, Issue 2, Version of Record online: 13 NOV 2000

Early and Late Recurrence after Gastrectomy for Gastric Carcinoma

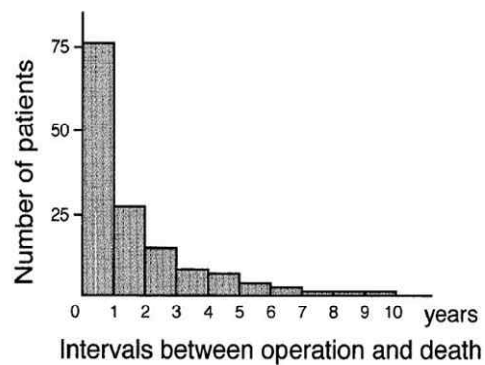
Univariate and Multivariate Analyses

Norio Shiraishi, M.D.
Masafumi Inomata, M.D.
Naofumi Osawa, M.D.
Kazuhiro Yasuda, M.D.
Yosuke Adachi, M.D.
Seigo Kitano, M.D.

Department of Surgery I, Oita Medical University,
Oita, Japan.

Between 1982–1995

수술한 504명 중 138명(27%) : 5년 내 재발
138명 중 75%:2년 내 재발함.



Cancer

Volume 72, Issue 11, Version of Record online: 28 JUN 2006

Recurrence of Early Gastric Cancer

Follow-up of 1475 Patients and Review
of the Japanese Literature

*Takeshi Sano, M.D., Mitsuru Sasako, M.D., Taira Kinoshita, M.D.,
and Keiichi Maruyama, M.D.*

- Analysis of 123 instances of recurrent disease, revealed that **hematogenous metastasis** was the most common mode of recurrence. **23% of patients died more than 5 years after surgery.**

VOLUME 30 · NUMBER 28 · OCTOBER 1 2012

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT

Long-Term Survivors of Gastric Cancer: A California Population-Based Study

*Pamela L. Kunz, Matthew Gubens, George A. Fisher, James M. Ford, Daphne Y. Lichtensztajn,
and Christina A. Clarke*

47,647명 중 9,325 (20%)가 3년 이상 생존

- Kaplan-Meier curves showed **longer** median disease-specific survival (DSS) in patients with tumors originating in the **fundus/body/antrum** compared with esophagus/cardia (13.4 v 10.8 months).
- Intestinal histology had significantly **longer** median DSS (28.9 months) compared with **other** (11.0 months) or **diffuse** (10.1 months) histology.

Jpn J Clin Oncol 2004;34(11)654–659
doi:10.1093/jjco/hyh120

Long-term Survival and Prognostic Factors in Patients with Metastatic Gastric Cancers Treated with Chemotherapy in the Japan Clinical Oncology Group (JCOG) Study

Motoki Yoshida¹, Atsushi Ohtsu¹, Narikazu Bokū¹, Yoshinori Miyata², Kuniaki Shirao³, Yasuhiro Shimada³, Ichinosuke Hyodo⁴, Wasaburo Koizumi⁵, Minoru Kurihara⁶, Shigeaki Yoshida¹ and Seiichiro Yamamoto⁷

¹Division of Digestive Endoscopy and Gastrointestinal Oncology, National Cancer Center Hospital East, Kashiwa, ²Department of Internal Medicine, Saku Central Hospital, Nagano, ³Division of Gastrointestinal Oncology, National Cancer Center Hospital, Tokyo, ⁴Department of Internal Medicine, National Shikoku Cancer Center Hospital, Matsuyama, ⁵Department of Internal Medicine, Kitasato University East Hospital, Sagami-hara, Kanagawa, ⁶Department of Gastroenterology, Showa University Toyosu Hospital, Tokyo and ⁷Cancer Information and Epidemiology Division, National Cancer Center Research Institute, Tokyo, Japan

Table 5. Relative risk of prognostic factors

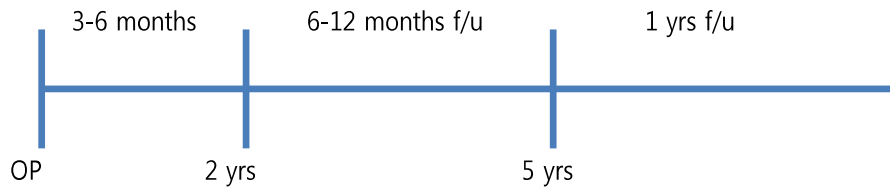
Variable	n	RR	95% CI	P-value
<i>Jpn J Clin Oncol</i> 2004;34(11)654–659 doi:10.1093/jjco/hyh120				
Age (years)				
<60	219	–		
≥60	278	1.16	0.97–1.40	0.2
Gender				
Male	364	–		
Female	133	0.93	0.75–1.14	0.5
Performance status				
0	174	–		
1	235	1.16	1.08–1.25	<0.01
2	85			
Histological type				
Intestinal	228	–		
Diffuse	266	1.13	0.97–1.30	0.11
Macroscopic type				
Scirrhou	137	–		
Non-scirrhou	360	1.27	1.02–1.25	0.04
History of gastrectomy				
Yes	84	–		
No	413	1.01	0.92–1.10	0.9
No. of metastatic sites				
1	315	–		
2	148	1.32	1.14–1.53	0.01
≥3	34			

Performance status

Non-scirrhou

Metastatic sties

Follow up after gastrectomy



- History taking
- Physical examination
- Routine lab,CEA
- EGD
- Chest CT,Abdomen CT

5 years later...?