

A Case of Complete Response After 1st Line FOLFOX-4 CTx in Stage IV Gastric Cancer Patient

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74세 남자 환자가 내원 6개월 전 어지러움을 느껴 지역 의원을 내원하여 시행한 혈액 검사에서 빈혈이 있어 내시경 검사 권유받았으나 검사 거절하고 지내다 내원 1개월 전 건강검진에서 시행한 상부위장관 내시경 검사에서 위궤양이 발견되어 한 달간 항궤양 치료를 받고, 1개월 뒤 추적 내시경 검사 시행 후 위암 의심되어 고신대학교 복음병원 소화기내과로 전원되었다. 내원 당시 혈압 140/90 mmHg, 심박수 70회/분, 호흡수 20회/분, 체온 섭씨 36.6도로 측정되었고, 5년 전 고혈압으로 진단받고 하루 amlodipine 5 mg 경구 투약하는 것 외에 특별한 과거력은 없었다. 입원하여 측정한 헤모글로빈이 4.8 g/dL로 낮아져 있었지만, 다른 혈액검사들은 CA19-9이 634.2 U/ml로 상승된 것 외에 특이사항이 없었다. CEA는 4.42 ng/ml였다. 입원하여 시행한 상부위장관 내시경 검사에서 분문부와 체부의 상부에 걸쳐 약 5×5 cm의 용기되고, 중심부의 출혈을 동반한 궤양이 있는 Borrmann II형의 종괴가 후벽에서 관찰되었다. 조직 검사에서 병리 판독은 papillary adenocarcinoma였고, 복부 CT에서는 내시경에서 관찰되었던 병변부위와 동일한 부위에 위벽이 두꺼워져 있었고, perigastric, peripancreatic lymph node enlargement (N3) 및 para-aortic lymph node enlargement(M1)도 저명하게 관찰되었다. PET CT에서도 복부 CT와 동일한 소견 관찰되며, 다른 장기로의 원격전이는 관찰되지 않았다. 병기는 진행성 위암 4기로 진단하여 palliative FOLFOX-4 chemotherapy를 2010년 9월 18일부터 2-3주 간격으로 시행하였고, 이후 상부 위장관 내시경 추적 검사에서 종괴의 크기가 점차 줄어들어 흉터만 남게되고, 복부 CT 추적 검사에서도 전이되었던 임파선이 더 이상 관찰되지 않았다. 2011년 12월 27일에 24번째의 FOLFOX-4 chemotherapy를 시행 후 투약 중단하였다. 이후 외래 통원을 하며, 주기적으로 촬영한 복부 CT와 상부위장관 내시경에서 재발의 소견은 관찰되지 않았고, chemotherapy 종결 17개월 후인 2013년 5월 30일에 시행한 PET CT에서도 재발의 증거는 보이지 않았다. 현재 규칙적으로 소화기내과 외래 통원을 하며 경과 및 추적 관찰 중이다.

Brief History : 74/M

- C/C: for evaluation and treatment
- P/I
 - 2010. 2월 어지럼증이 있어 지역 의원 방문하여 시행한 혈액검사에서 빈혈 소견 보여 내시경 검사 권유 받았으나 거절 후 지냄.
 - 2010. 8월 건강 검진시 상부위장관 내시경 검사에서 gastric ulcer라 듣고 medication 한달 간 시행받음.
 - 2010. 09. 07 f/u위해 다른 2차병원 내원하여 시행한 상부위장관내시경에서 malignancy 의심되어
 - 2010. 09. 13 본원 소화기내과 외래 방문 후 입원.
- Past Hx.: DM/HTN/TB/Hepatitis (-/+/-/-)
 - 5-6년 전 진단받고 amlodipine 복용
- Social Hx.
 - Alcohol: 소주 1병, 6회/주, 40년간
 - Smoking: 10 pack/year
- Family Hx.: non-specific

Review of system

- **General**
 - General weakness/ Fatigue (+/+)
 - Fever/ Chill Cold sweating/ Night sweating(-/-/-/-)
 - Wt. loss: 3 kg/ 3 months
- **Head and Neck**
 - Headache/ Dizziness (-/+)
 - Posterior neck pain/ neck stiffness (-/-)
- **Respiratory system**
 - Cough/ Sputum/ Night cough/ Whitish sputum (-/-/- /-)
 - Hemoptysis (-)
 - Sore throat/ Rinorrhea/ Nasal obstruction (-/-/-)
 - Dyspnea (-) DOE(+)
- **Cardiovascular system**
 - Chest pain/ Palpitation (-/-)

Review of system

- **GI system**
 - Anorexia/ Nausea/ Vomiting (-/-/-)
 - Diarrhea/ Constipation (-/-)
 - Acid regurgitation/ Epigastric soreness (-/-)
 - Post prandial epigastric discomfort (-)
 - Hematemesis/ Melena/ Hematochezia (-/-/-)
 - Bowel habitus change/ Tenesmus (-/-)
- **Urinary system**
 - Dysuria/ Frequency/ Urgency (-/-/-)
 - Hematuria/ Nocturia/ Incontinence (-/- /-)

Physical examination

- **General appearance**
 - Alert mentality
 - Chronic ill-being appearance
- **HEENT**
 - Sclera: non- icteric
 - Conjunctiva: pale
 - Tongue: non-dehydrated
 - Neck node : non palpable
- **Chest**
 - Symmetry, deformity (-)
 - Breath sound: clear
 - Heart sound: regular, murmur (-)
- **Abdomen**
 - Soft, normo-active bowel sound
 - Palpable liver or spleen (-)
 - Palpable mass (-)
 - Tenderness/ Rebound tenderness (-/-)
- **Extremity**
 - Pretibial pitting edema (-/-)

Vital sign

BP: 140/90 mmHg,

HR: 70회/분,

RR: 20회/분 ,

BT: 36.6°C

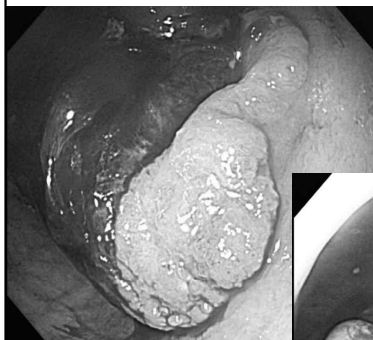
Initial laboratory findings

HEMATOLOGY			
WBC Count		7.3	x10.e3/uL
WBC Diff			
%Neutro		56	%
%BAND		4	%
%Lymph		30	%
%MONO		6	%
%EOS		4	%
%BASO		0	%
ANC(Neutro+BAND)		60	%
Hb		4.8	L g/dL
HT		15.7	L %
RBC Count		2.48	L x10.e6/uL
MCV		63.1	L fL
MCH		19.1	L pg
MCHC		30.4	L g/dL
RDW		19.1	H %
PLT Count		365	H x10.e3/uL
PCT		0.24	%
MPV		6.6	L fL
PDW		16.4	%

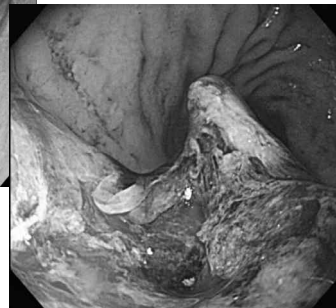
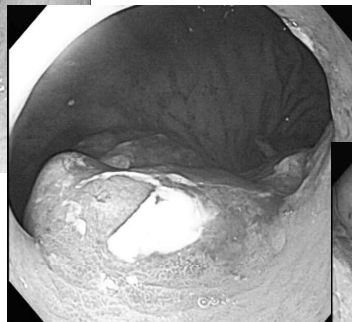
Initial laboratory findings

혈액화학검사(1)	BUN	11	mg/dl
	Creatinine(CR)	0.8	mg/dl
	[eGFR, MDRD]	101	mls/min
	Sodium(Na)	138	meq/L
	Potassium(K)	4.1	meq/L
	Chloride(CL)	107	meq/L
	Total CO2	25.3	meq/L
	[Anion Gap]	9.80	(단, pCO ₂
	Protein Total	6.3	gm/dL
	Albumin	4.0	g/dl
	Bilirubin Total	0.3	mg/dl
	Direct Bilirubin	0.2	mg/dl
	Alk Phosphatase	59	IU/L
	r-GTP	18	U/L
	S-GOT	17	IU/L
	S-GPT	10	IU/L
	L.D.H	284	IU/L
혈액응고및특수	Prothrombin Time	12.3 (C:12.0)	sec
	PT INR	1.12	(pt)
	PT %	80.2	%
	PTT	30.1 (C:32.1)	sec
면역화학검사(1)	CEA	4.42	ng/ml
	CA19-9	634.20 H	U/ml

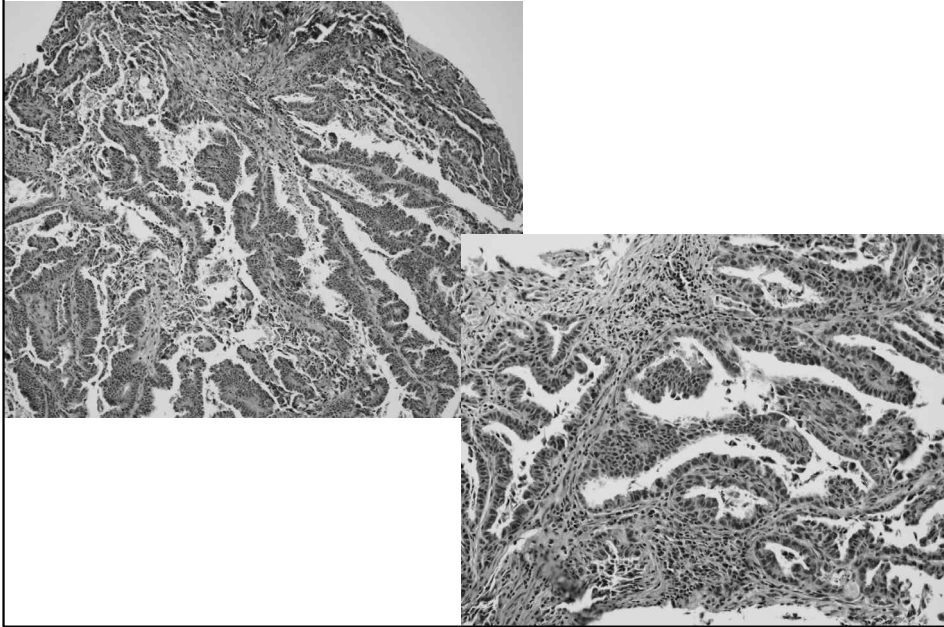
2010. 09.14 EGD



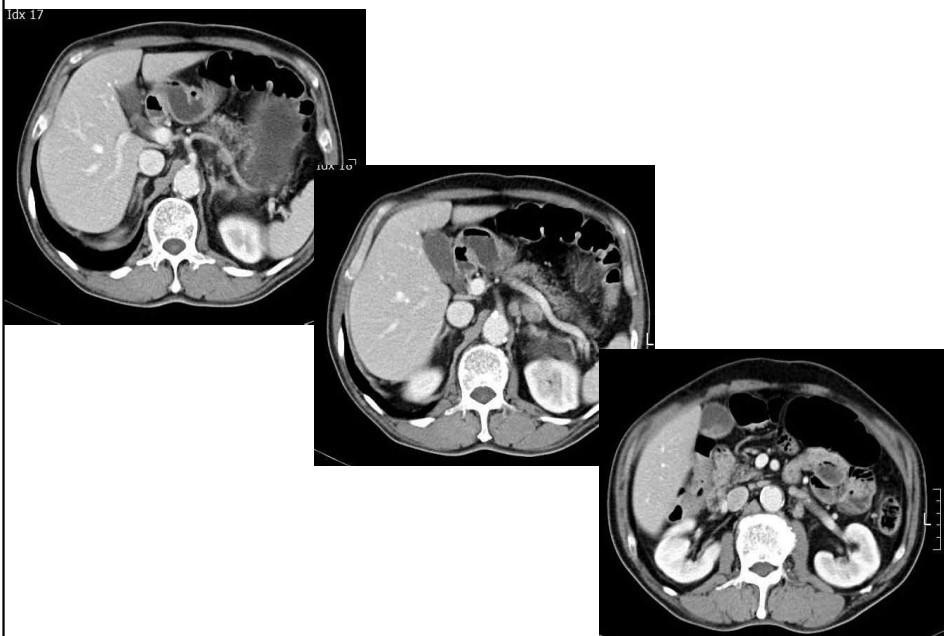
AGC, Borr II



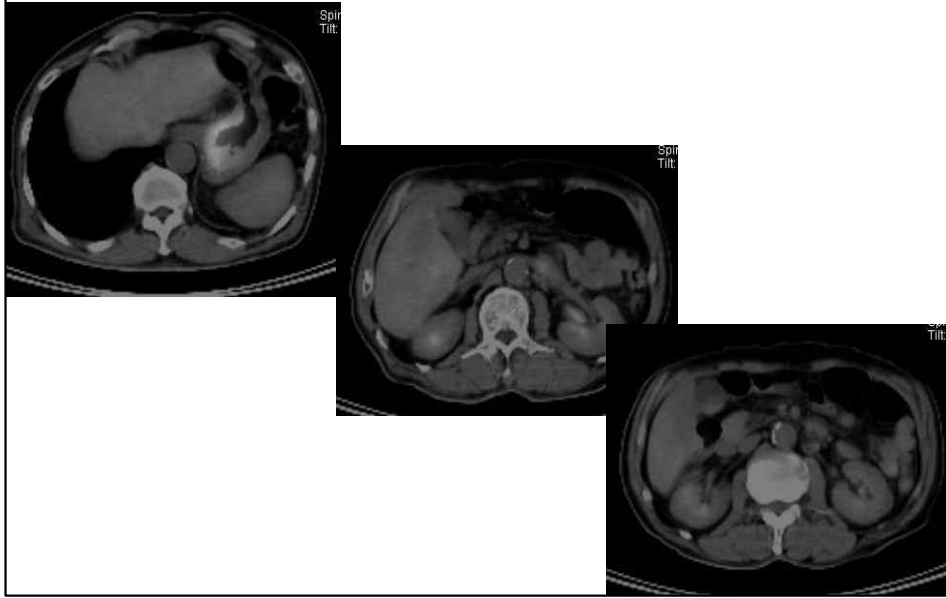
Pathology Papillary adenocarcinoma



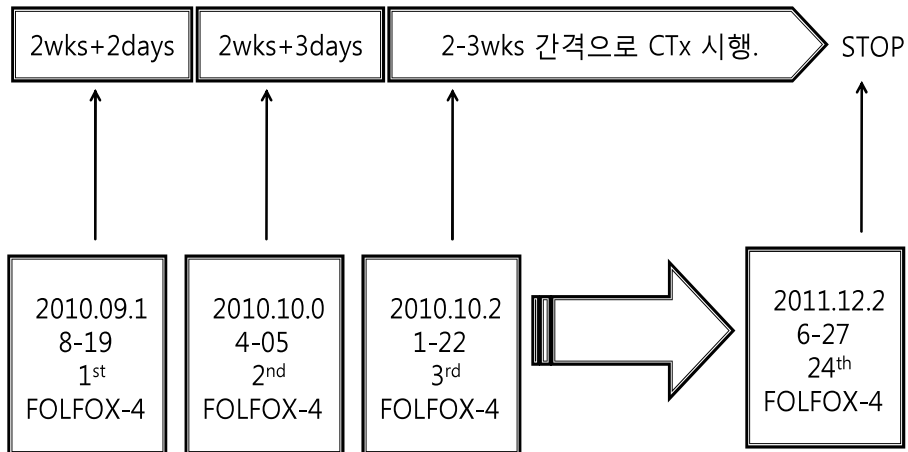
2010.09.15 Abd. CT



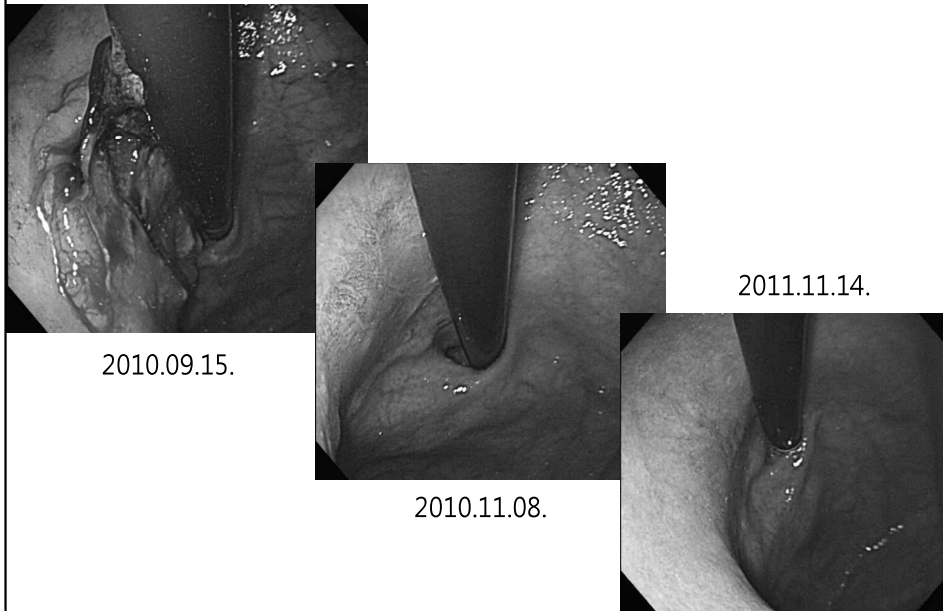
2010.09.17 PET-CT



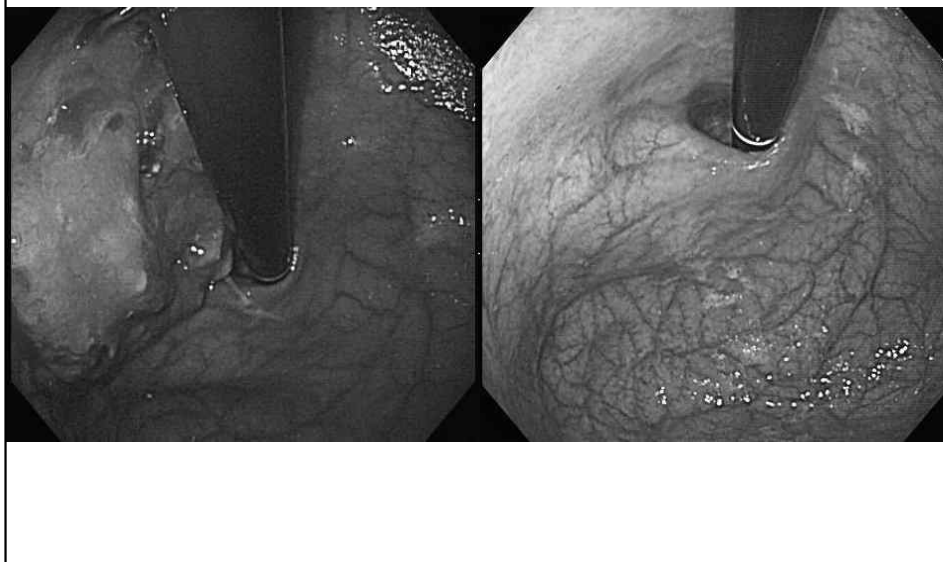
Progress



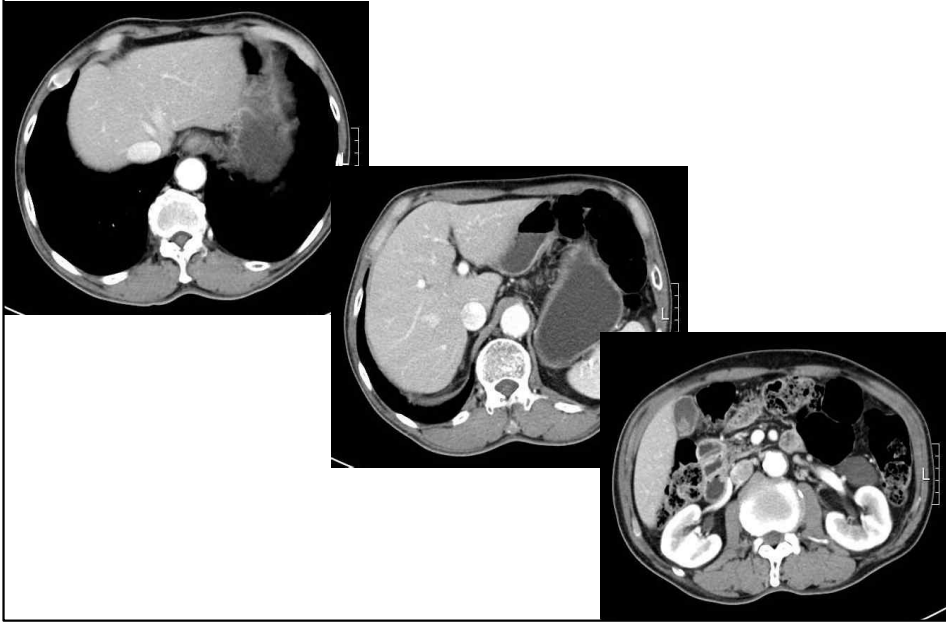
EGD Progress



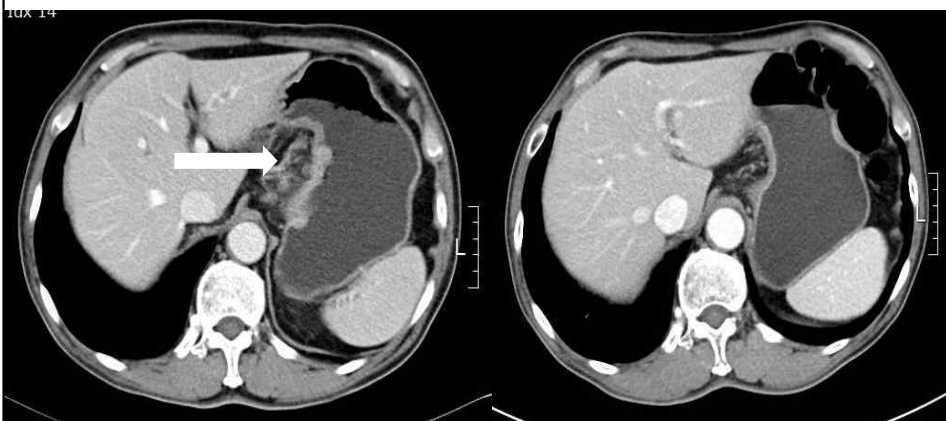
2012.05.10 EGD (CTx 종결 4개월 후)



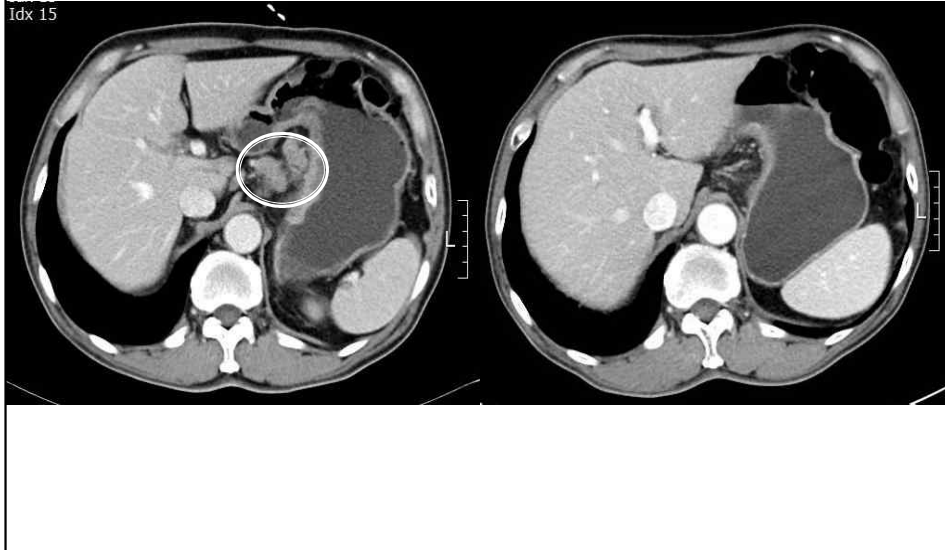
2012.05.10 Abd. CT (CTx 종결 4개월 후)



2012.05.10 (CTx 종결 4개월 후)



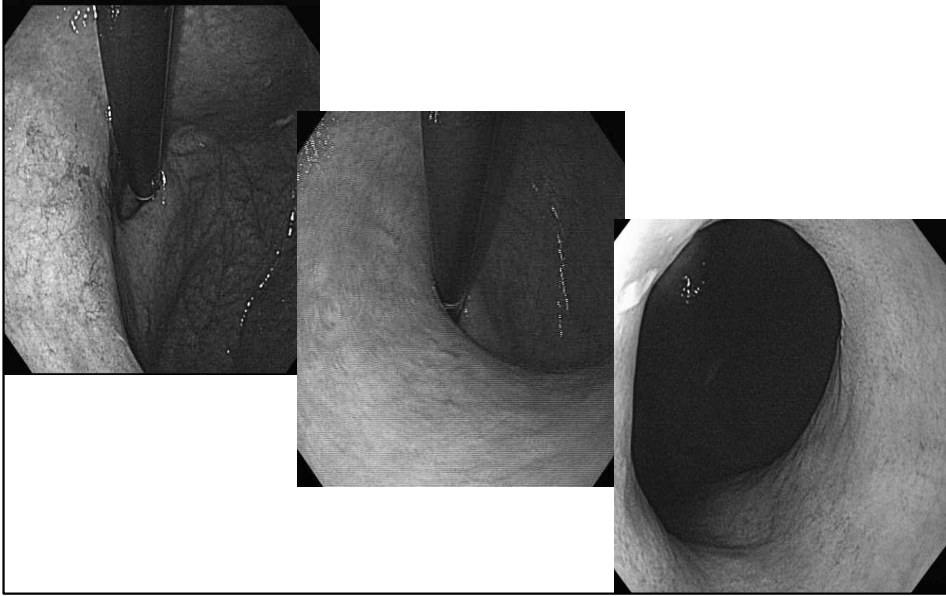
2012.05.10 (CTx 종결 4개월 후)



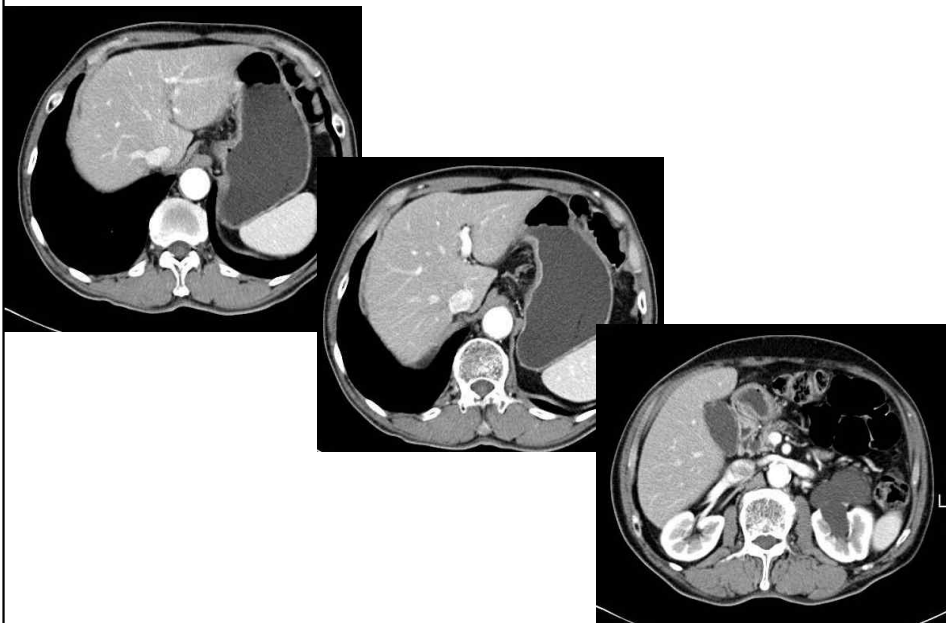
2012.05.10 (CTx 종결 4개월 후)



2013.02.14 EGD (CTx 종결 14개월 후)



2013.02.14 Abd. CT (CTx 종결 14개월 후)



2013.05.30. PET CT (CTx 종결 17개월 후)

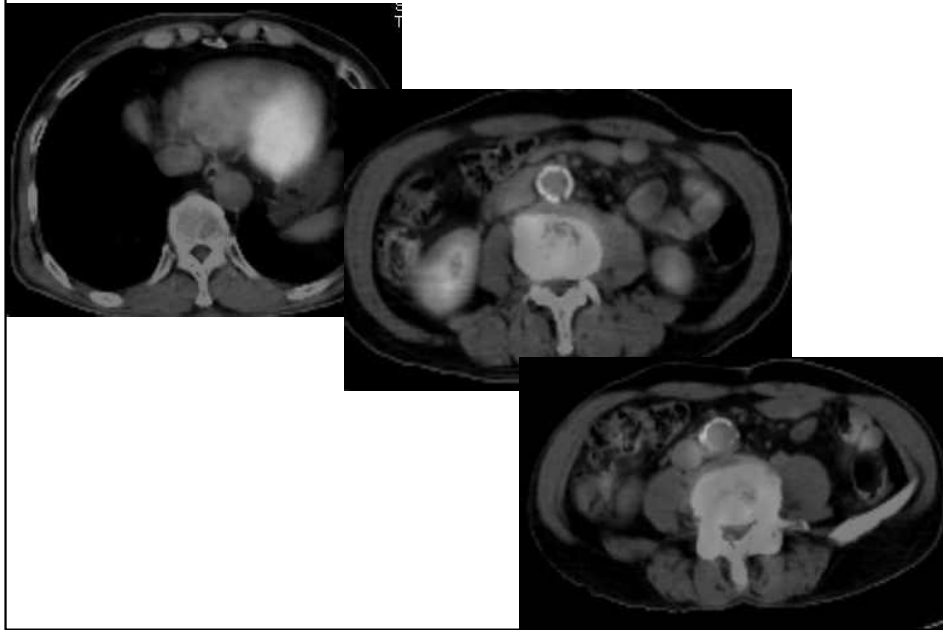


Table 1: Patient characteristics

	No. of patients	%
Patients	34	100
Age, years		
Median	52	
Range	28-69	
Sex		
Male	24	70.5
Female	10	29.5
Performance		
ECOG, 0-1	27	79.5
ECOG, 2	7	20.5
Prior surgery		
Curative gastrectomy	10	29.5
Palliative gastrectomy	9	26
Palliative oophorectomy	1	3
Prior adjuvant chemoradiation therapy	7	20.5
Histology of adenocarcinoma		
Well differentiated	2	6
Moderately differentiated	8	23
Poorly differentiated	17	50
Signet ring cell	4	12
Grade undetermined	3	9
Metastatic sites		
Lymph nodes	31	91
Liver	15	44
Peritoneum	12	35
Lung	3	9
Bone	2	6
Ovary	2	6
No. of organs		
1	10	29.5
2	17	50
>2	7	20.5

Journal review

33 (97%) of 34: assessable for response.

Overall response rate (ORR) : 53%

 Complete response (CR) : 1 (3%)

 Partial response (PR) : 17 (50%)

Stable disease (SD) : 6 (18%)

Median OS : 12.1 months
(95% CI=7.0-17.1 months)

FOLFOX (oxaliplatin and 5-fluorouracil/leucovorin) in patients with untreated metastatic gastric adenocarcinoma Phase II study

Indian Journal of Cancer | October-December 2011 | Volume 48 | Issue 4

Tabla 1. Respuesta a la quimioterapia con FOLFOX-4 en pacientes con adenocarcinoma gástrico observada en primera y segunda línea

Respuesta en primera línea (%) N: 19				Respuesta en segunda línea (%) N: 10			
RC	RP	EE	P	RC	RP	EE	P
5	73	11	11	0	60	40	0

RC: Respuesta completa. RP: Respuesta parcial. EE: Enfermedad estable. P: Progresión.

Patients with stage IV gastric cancer were included.

Between 2003 and 2006, 29 patients (median age 52.5 years, 69% males) FOLFOX-4 was given as first line treatment in 65% patients and as second line in 35%.

Complete response : 4.6%
 Partial response : 68%
 Stable disease : 20.6%
 Progression : 6.8%
 Median survival : 12.5 months

Treatment of advanced gastric cancer with oxaliplatin plus 5-fluorouracil/leucovorin (FOLFOX-4 chemotherapy)

Rev Méd Chile 2007;135:1380-1387

Gastric Cancer (2013) 16:411-419

DOI 10.1007/s10120-012-0204-z

ORIGINAL ARTICLE

A phase II study of modified FOLFOX as first-line chemotherapy for metastatic gastric cancer in elderly patients with associated diseases

Vincenzo Catalano · Renato Bisonni · Francesco Graziano · Paolo Giordani · Paolo Alessandroni · Anna Maria Baldelli · Virginia Casadei · David Rossi · Stefano Luzi Fedeli · Silvia D'Emidio · Lucio Giustini · Giammaria Fiorentini

Characteristics	n	%
Number of patients	43	
Sex, male/female	27/16	62.8/37.2
Age, years median (range)	74 (70-83)	
Performance status		
0	19	44.2
1	20	46.5
2	4	9.3
Lauren classification		
Intestinal type	23	53.5
Diffuse type	16	37.2
Mixed	4	9.3
Primary tumour		
Oesophagogastric junction	9	20.9
Stomach	32	74.4
Anastomosis	2	4.7
Prior therapy		
Surgery	26	60.5
Adjuvant chemotherapy	6	14.0
Number of organs involved		
1	10	23.3
2	20	46.5
3-5	13	30.2
Metastatic sites		
Lymph nodes	17	39.5
Liver	13	30.2
Peritoneum	18	41.9
Bone	1	2.3
Lung	6	13.9
Other	10	23.2
Royal Marsden Hospital Prognostic Index		
Good	11	25.6
Moderate	30	69.8
Poor	2	4.6

Table 3 Objective tumor response rates in advanced untreated elderly gastric cancer patients (n = 43), according to RECIST

Response	Number (%)
Complete response	3 (7.0)
Partial response	12 (27.9)
ORR (95 % CI)	34.9 (20.6-49.1)
Stable disease	15 (34.9)
Progressive disease	11 (25.6)
Not assessable	2 (4.6)

CI confidence interval, ORR overall response rate, RECIST Response Evaluation Criteria in Solid Tumors

대한내과학회지: 제 82 권 제 1 호 2012

<http://dx.doi.org/10.3904/kjm.2012.82.1.37>

진행성 위암 환자에서 1차 요법으로 FOLFOX-4 병합화학 약물치료의 효과와 안정성

고신대학교 의과대학 내과학교실

이천우 · 박무인 · 박선자 · 문 원 · 김형훈 · 이해원 · 구기환 · 김부경

FOLFOX-4 Combination Chemotherapy as a First-line Treatment in Patients with Advanced Gastric Cancer

Table 1. Patients characteristics	
Characteristics	No. of patients (%)
Sex	
Male	19 (54.3)
Female	16 (45.7)
Age (yr)	61 (27-77)
ECOG performance status	
0	4 (11.4)
1	25 (71.4)
2	6 (17.2)
Histology	
Adenocarcinoma	25 (71.4)
Signet ring cell carcinoma	9 (25.7)
Unknown	1 (2.9)
Site of Metastasis	
Liver	11 (31.4)
Peritoneum	11 (31.4)
Lymph node (distant M1 node)	8 (22.9)
Lung	2 (5.7)
Bone	2 (5.7)
Ovary	1 (2.9)
Number of metastatic sites	
1	25 (71.4)
2	10 (28.6)

Table 2. Treatment response of FOLFOX-4 chemotherapy	
Response ^a	No. of Patients (%)
Complete remission	0 (0)
Partial remission	19 (54.3)
Stable disease	13 (37.1)
Progressive disease	3 (8.6)

^a WHO criterion.