

prognosis in CY1, depth of tumor invasion (T) is correlated to the survival. T4 patients showed significantly poorer prognoses than T3 ( $p = 0.0011$ ). The survival is not significantly different between resection of primary tumor and no resection. Patients with gastro-jejunal by-pass showed significantly poorer prognoses as compared with other surgery ( $p = 0.0002$ ). Thirty four patients had additional anticancer treatment other than surgery. Three had chemo-radiotherapy. Eleven had multi-drug combination chemotherapy. Twenty had single drug regimen as the 1<sup>st</sup> line chemotherapy after operation. There is no statistical difference for their survival between these three groups ( $539 \pm 163$  days,  $545 \pm 126$  days,  $600 \pm 13$  days,  $p = 0.7682$ ). **Conclusions:** Only T factor revealed prognostic influence among CY1 gastric cancer. Volume reduction surgery failed to reveal survival benefit for CY1. Chemotherapy with single agent showed the same survival impact as multidrug regimen for the 1<sup>st</sup> line.

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POSTER

**Metabolic response with [18F] fluorodeoxyglucose (FDG) Positron Emission Tomography (PET) scanning during chemoradiotherapy (RT-CT) of oesophageal cancers: feasibility and prognostic value**

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**Background:** Assessment of metabolic response, defined as a decrease of Standardised uptake value (SUV)  $\geq 50\%$ , realized during RT-CT could help to define the patients who do not need surgery and could be treated by exclusive RT-CT.

**Material and Methods:** Between July 06 and August 08, 35 consecutive patients (pts) (M/F ratio = 21/14; median age 68 yrs) who began a treatment for locally advanced cancer of the oesophagus (T3: 32 pts, T4: 3 pts; N1: 23 pts, M1a: 3 pts, squamous cell carcinoma: 28 pts) by RT-CT (5FU, cisplatin and 40 Gy) were explored with PET prior any treatment and planned to have a second PET at 20 Gy. PET images were evaluated without knowledge of conventional imaging and clinical history. PET results and Maximum SUV were related to disease-free survival (DFS) and overall survival (OS).

**Results:** 7 pts (19%) could not have the second PET for these reasons: Progressive disease (3), RT not performed (1), No FDG uptake at 1<sup>st</sup> TEP (1), patient refusal (2). 28 pts are evaluable. Mean SUV max before treatment was 10.8 and at 20 Gy, 6.0 ( $p < 0.0001$ ). There were 12 (43%) metabolic responders. 6 pts underwent surgery with 2 pathological complete responses. DFS at 1 yr was 53% for metabolic responders and 10% for non-responders ( $p = 0.0003$ ). OS rates were 80% vs 46%, respectively ( $p = 0.1$ ).

**Conclusion:** Evaluation of metabolic response with 18-FDGT PET-scan could be done for 80% of the patients in routine practice. It is correlated to DFS and probably to OS. Evaluation of response to chemoradiotherapy in locally advanced oesophagus cancer could be done by radiology and endoscopy, which are still necessary, but PET-scan could help in the decision of salvage surgery.

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POSTER

**A phase II study of adjuvant chemotherapy with docetaxel, capecitabine and cisplatin in patients with curatively resected stage IIIB and IV advanced gastric cancer**

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**Background:** Previously we observed very good efficacy of docetaxel, capecitabine, and cisplatin combination chemotherapy (DXP) in neoadjuvant or palliative setting in advanced gastric cancer. The aim of this study was to evaluate the efficacy and safety of DXP triplet as an adjuvant chemotherapy in gastric cancer at high risk of recurrence after curative resection.

**Methods:** Between January 2007 and August 2008, patients with pathologic stage IIIB or IV (M0) after curative D2 dissection were enrolled in this study. Adjuvant DXP consisted of 6 cycles of docetaxel 60 mg/m<sup>2</sup> IV on day 1, cisplatin 60 mg/m<sup>2</sup> IV on day 1, and capecitabine 1,875 mg/m<sup>2</sup>/day PO on day 1-14 every 21 days, which started from 3 to 6 weeks after the surgery.

**Results:** A total of 46 patients were accrued. Among them, 13 (28%) had stage IIIB, and 33 (72%) had stage IV. Ten (22%) underwent distal gastrectomy, and 36 (78%) underwent total gastrectomy. Thirty-nine (85%) patients completed planned 6 cycles of DXP chemotherapy. After a median follow up of 10.8 months (range 5.6-22.7 months) for the surviving patients, 6 patients died and 9 patients relapsed. 1-year relapse free survival and 1-year overall survival rates were 84% and 92%, respectively. Major toxicity was neutropenia, grade 3/4 of which occurred in 77% of patients. But there was only 4% of neutropenic fever and no treatment related mortality. Grade

3/4 nonhaematologic toxicities were anorexia (21%), nausea (10.7%), and stomatitis (4.3%). Relative dose intensities of docetaxel, capecitabine, and cisplatin were 0.87, 0.75, and 0.94, respectively.

**Conclusions:** These data suggest that DXP triplet can be safely administered in adjuvant setting. Further follow-up is needed to evaluate long-term efficacy of adjuvant DXP triplet in stage IIIB or IV (M0) gastric cancer.

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POSTER

**The clinicopathologic features and clinical outcomes of gastric cancer initially presented with disseminated intravascular coagulopathy**

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**Background:** There are a few patients with disseminated intravascular coagulopathy (DIC) as the first presentation of gastric cancer and there are few systematic studies for prognosis and clinical outcome of these patients. We evaluated the clinicopathologic features and clinical outcomes of this population.

**Materials and Methods:** We consecutively enrolled patients diagnosed with metastatic or recurrent gastric cancer and DIC at initial presentation of cancer between July 2001 and June 2008 in Seoul National University Hospital. DIC was diagnosed by International Society on Thrombosis and Hemostasis or Korean Society on Thrombosis and Hemostasis criteria. Clinicopathologic variables and clinical outcomes were analyzed retrospectively.

**Results:** Twenty-one patients were enrolled. Median age was 47 years (range, 24-72 years) and 13 patients (61.9%) were male. Performance status was ECOG 1 (n=4), 2 (n=9), 3 (n=4) and 4 (n=4). Eighteen patients (85.7%) had bone metastasis and 9 patients (42.9%) had hemorrhagic complication of DIC: tumor bleeding of stomach 6, subdural hematoma 1, bleeding from ruptured metastatic tumor of liver 1, and hemorrhagic cyst formation of liver 1. Fourteen patients (66.7%) received palliative chemotherapy. Others received only best supportive care (BSC). The important factors influenced to abandon the palliative chemotherapy, were uncontrolled bleeding (n=4), spinal cord compression with neurologic deficit (n=2), and combined infection (n=1). The median overall survival (OS) of all patients was 58 days (range, 2-342 days). The OS of BSC was significantly shorter than that of chemotherapy group (median, 16 vs. 99 days,  $P < 0.001$ ).

In chemotherapy group, there were 11 response evaluable patients: 2 partial response (18.2%), 5 stable disease (45.5%), 4 progressive disease (36.4%).

Median progression free survival and OS of patients with stable disease were 89 days (range, 83-191 days) and 117 days (range, 94-315 days), respectively. And OS of patients with progressive disease in chemotherapy group, was significantly longer than that of BSC group (median, 92 vs. 16 days,  $P = 0.009$ ).

**Conclusion:** The prognosis of gastric cancer initially presented with disseminated intravascular coagulopathy is poor but palliative chemotherapy prolongs overall survival compared with BSC. Therefore, early and intensive management for correctable complication of DIC followed by chemotherapy should be considered in this population.

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POSTER

**Helicobacter pylori infection as an independent prognostic factor for locally advanced gastric cancer with curative resection**

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**Background:** A few studies reported the association between *helicobacter pylori* (HP) infection and better overall survival (OS) in resected gastric cancer patients (pts).

**Materials and Methods:** We investigated the HP infection status and its association with clinicopathologic characteristics in 274 locally advanced gastric cancer pts (stage IB: 25, II: 82, IIIA: 80, IIIB: 39, IV: 48) who underwent adjuvant chemotherapy (CTX) after curative resection ( $\geq D2$  dissection). HP infection status in hematoxylin and eosin stained peritumoral tissue was graded according to the updated Sydney System and categorized as HP (-) (normal or mild infection) and HP(+) (moderate or marked infection) (Am J Surg Pathol 20:1161, 1996). Eighty-one pts received 5-FU, doxorubicin (DOX) CTX (5-FU 500 mg/m<sup>2</sup> weekly for 36 wks, DOX 40 mg/m<sup>2</sup> q 3 weeks  $\times 12$ ) with or without OK432, while 193 pts underwent 5-FU, mitomycin-C (MMC), and polysaccharide-K (PSK) CTX (5-FU 500 mg/m<sup>2</sup> weekly for 24 wks, MMC 8 mg/m<sup>2</sup> q 6 wks  $\times 4$ , PSK 3 g/day for 16 wks) (Br J Cancer 84:186, 2001, Hepatogastroenterol 54:290, 2007).

**Results:** The median follow-up duration of survivors was 135 (112–176) months. HP(–) was significantly correlated with old age (>54), total gastrectomy, Bormann type IV, larger tumor size (>5 cm), and stage IIIB. In univariate analysis, pts with HP(–) (138 pts) demonstrated significantly poor 10-year OS compared with those with HP(+) (136 pts) (20.9% vs. 82.3%,  $p < 0.0001$ ). HP(–) was associated with poor outcome in all stages. In multivariate analysis, HP(–) was the most significant independent prognostic factor of poor OS (hazard ratio: 6.32, 95% CI: 4.10–9.74,  $p < 0.0001$ ) followed by advanced stage ( $p = 0.001$ ) and old age ( $p < 0.0001$ ).

**Conclusions:** HP infection status seems to have strong prognostic significance in locally advanced gastric cancer. HP(–) pts may need intensified adjuvant treatment and careful follow-up.

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POSTER

#### Phase II study of docetaxel, oxaliplatin and S-1 (DOS) for patients with advanced gastric cancer

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**Background:** Docetaxel, oxaliplatin and S-1 have shown significant efficacy in gastric cancer. These drugs have distinct mechanisms of action and no overlapped key toxicities. Furthermore, fluoropyrimidine and docetaxel or oxaliplatin have shown synergism in vivo studies and in clinical trials. We performed a phase II study of combination docetaxel, oxaliplatin and S-1 (DOS) to evaluate the efficacy and safety in advanced gastric cancer.

**Material and Methods:** Eligible patients were those who had unresectable, locally advanced or metastatic, gastric adenocarcinoma. Both initially diagnosed and recurrent patients with no previous history of chemotherapy except adjuvant chemotherapy were enrolled. The patients of age 18 to 70 with ECOG PS 0–2 were enrolled to this study. Docetaxel 52.5 mg/m<sup>2</sup> and oxaliplatin 105 mg/m<sup>2</sup> were administered intravenously on day 1 and S-1 80 mg/m<sup>2</sup> was administered orally on days 1–14. Cycles were repeated every 21 days. Patients were treated until disease progression or unacceptable toxicity.

**Results:** Forty-two patients (male/female 31/11; median age 55, range 25–69; ECOG PS 0/1/2 13/28/1) have been enrolled in this study. Ten patients had recurrent cancer after surgery and 32 patients were diagnosed as a metastatic disease. Tumor differentiation was 5 well, 11 moderate, and 26 poor. Main sites of metastasis were 37 lymph node, 18 peritoneum, 11 liver, 1 bone and 9 others. A total of 225 cycles were administered (median 4, range 1–24). Thirty-nine patients were evaluated for toxicity and thirty-seven for response. The common grade 3/4 toxicities were leukopenia (23% of patients), neutropenia (36%), febrile neutropenia (13%), and anemia (10%). There were 2 CR and 19 PR. The overall response rate was 57%. The preliminary median progression free survival was 11.4 (95% CI, 8.1–14.8) months and median survival time was 15.8 (95% CI, 2.1–29.6) months.

**Conclusions:** These data suggest that DOS regimen is active and is well tolerated in patients with advanced gastric cancer.

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POSTER

#### A phase II study of Docetaxel and Oxaliplatin combination as first-line chemotherapy in recurrent gastric cancer patients after Fluoropyrimidine and/or Cisplatin adjuvant treatment

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**Background:** After two important randomised trials of the East (S-1 as adjuvant treatment; Sakuramoto S et al, N Engl J Med 2007) and the West (MAGIC trial; Cunningham D et al, N Engl J Med 2006), surgery alone is no longer the standard treatment for patients with resectable gastric cancer. Therefore, urgent investigation is demanded which regimen is more effective for patients with recurrent gastric cancer after combined treatment with surgery and perioperative or adjuvant chemotherapy.

**Materials and Methods:** Patients with histologically confirmed and measurable advanced gastric cancer that had relapsed after fluoropyrimidine and/or cisplatin-based adjuvant chemotherapy received docetaxel 35 mg/m<sup>2</sup> i.v. on day 1, 8 plus oxaliplatin 100 mg/m<sup>2</sup> i.v. on day 1 every 3 weeks until disease progression or unacceptable toxicities.

**Results:** Between Feb 2007 and Mar 2009, total 27 patients (pts) who had received adjuvant chemotherapy for median 5.7 months (range, 0.1–49.1) were enrolled. A total of 18 pts (66.7%) had exposed all two drugs for fluoropyrimidine and cisplatin. The median age was 58 years (range, 40–68). After a median 4 (range, 1–13; total, 123) cycles of chemotherapy, 25 pts and 120 cycles were evaluable for response and toxicity, respectively. In intention-to-treat analysis, the overall response rate was 44.0% (95% C.I., 24.6–63.4%), including 1 CR, 10 PRs. After a median follow-up of 8.5 months (range, 2.0–20.6), median time to progression was 6.9 months (95% C.I., 3.4–10.4) and median overall survival was 12.8 months (95% C.I., 8.7–16.7). Commonly observed grade 3/4 adverse events were neutropenia (52.2% of pts), diarrhea (20.0%), anorexia (8.0%), stomatitis (8.0%) and motor neuropathy (4.0%). Treatment was delayed in 29 cycles (24.2%). The dose of docetaxel on D1, 8 and oxaliplatin were reduced during 22 (18.3%), 25 (20.8%) and 23 cycles (19.2%), respectively. Major causes for treatment delay and dose reduction of two drugs were neutropenia and diarrhea. There were three pts of neutropenic fever, and one pt of treatment-related death.

**Conclusions:** Docetaxel and oxaliplatin combination chemotherapy was active and tolerable except grade 3 diarrhea as first-line treatment in patients with recurrent gastric cancer after fluoropyrimidine and/or cisplatin-based adjuvant chemotherapy.

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POSTER

#### Characteristics of patients with early gastric cancer who had undergone surgery in two institutes

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**Background:** The incidence of early gastric cancer (EGC) has been increasing worldwide owing to advances with diagnostic techniques and screening programs. The present study was designed to investigate the characteristics of EGC patients who had undergone surgery.

**Materials and Methods:** EGC is defined according to the Japanese classification of gastric carcinoma. We reviewed 529 patients with gastric cancer who had undergone gastrectomy at Masan Samsung Hospital, Masan, Korea and Ulsan University Hospital, Ulsan, Korea from December 2002 to December 2005.

**Results:** Two hundred sixty-one patients (49%) were diagnosed as EGC (155 intramucosal EGC (mEGC), 106 intrasubmucosal EGC (smEGC), 123 differentiated EGC, and 138 undifferentiated EGC). The mean diameter of tumor was 2.49±1.55 cm (2.18±1.45 cm in mEGC and 2.94±1.60 cm in smEGC,  $p = 0.000$ ). The incidence of lymph node metastasis was 11.5% (30 out of 261 patients). Univariate analysis revealed that a tumor larger than 2 cm (17.6% vs. 6.3%), submucosal invasion (20.8% vs. 5.2%), and the presence of lymphovascular invasion (LVI) (33.3% vs. 6.6%) were significantly associated with a higher lymph node metastasis rate. In multivariate analysis, LVI was independent predictive factor for lymph node metastasis ( $p = 0.005$ ), while submucosal invasion was marginally predictive ( $p = 0.069$ ) and tumor size was not ( $p = 0.208$ ). At a median follow-up of 1023 days, only 2 patients relapsed and 1 patient died due to disease progression.

**Conclusions:** LVI was independent predictive factor for lymph node metastasis. In cases that LVI was present after endoscopic resection, radical gastrectomy should be recommended. Endoscopic resection data will be analyzed and compared with surgery data.

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POSTER

#### A phase II study of weekly low-dose docetaxel and oxaliplatin as first-line treatment in patients with advanced gastric cancer

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**Background:** Docetaxel and oxaliplatin are active agents for advanced gastric cancer. The combination of these two drugs in tri-weekly schedule