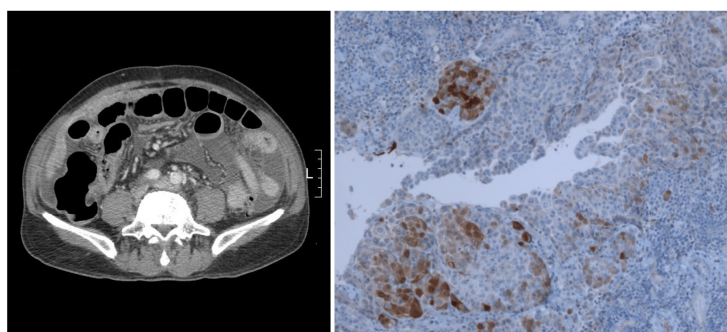


## Malignant mesothelioma of the peritoneum misdiagnosed as tuberculous peritonitis

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Differential diagnosis for ascites is still challenging to physicians. Generally, physicians have used indirect Methods such as clinical manifestations, laboratory tests including serum-ascites albumin gradient, and radiologic findings to investigate causes of ascites. Due to absence of a definitive modality for diagnosis of ascites, there can be ambiguity of diagnosis. Recently, many case reports reported that elevated serum cancer antigen(CA)-125 was valuable to diagnose tuberculous peritonitis. Especially, in Korea, the prevalence of extrapulmonary tuberculosis such as tuberculous peritonitis and intestinal tuberculosis as well as pulmonary tuberculosis is still high. Physicians should consider the possibility of tuberculous peritonitis as a cause of ascites. Herein, we report the case of a 66-year-old male with malignant peritoneal mesothelioma in spite of suspecting tuberculous peritonitis due to markedly elevation of serum CA-125 as well as clinical manifestations. The patient complained of abdominal distension, anorexia and mild chilling sensation. On radiologic study including ultrasonography and abdominal computed tomography, large amount of ascites and multiple lymph node enlargements with peritoneal thickening were detected. Considering of radiologic finding and results of ascitic fluid analysis including leukocyte cell count with lymphocyte-predominant, elevated adenosine deaminase level, and low serum-ascites albumin gradient as well as elevated serum CA-125 level(100.8 µg/mL), tuberculous peritonitis was suspected strongly. However, a few malignant cell of unknown origin was detected in cytology exam of ascitic fluid. Finally, the patient was confirmed as malignant peritoneal mesothelioma through laparoscopic peritoneal biopsy. The patient was referred for cytoreductive surgery or chemotherapy, but he died of severe sepsis before treatment. Malignant peritoneal mesothelioma is a very rare and lethal neoplasm which can also be a cause of ascites. In conclusion, this case showed that all possibilities should be kept open till the final diagnosis with confirmative Methods and we should make a differential diagnosis for cause of ascites carefully.



## Efficacy of Endoscopic Size Measurements of Signet Ring Cell Early Gastric Cancer

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**Background/aims:** Indications for endoscopic submucosal dissection (ESD) of early gastric cancer (EGC) are expanding, but signet ring cell (SRC) carcinoma is still unclear because of its unclear boundaries. The purpose of this study was to compare pathologic size and endoscopic size in SRC type EGC and to find risk factors associated with tumor size underestimation. **Methods:** A retrospectively medical records reviewed of total 137 patients with diagnosed SRC type EGC between January 2009 and December 2016 at our tertiary hospital. According to pathologic and endoscopic tumor sizes, classified into correct estimation, underestimation and overestimation groups, and risk factors related to underestimation were analyzed. **Results:** Among 137 patients with SRC type EGC, 77 patients (56.2%) had undergone correct estimation, 43 patients (31.4%) had underestimation and 17 patients (12.4%) had overestimation. Mean pathologic size (SD) was 20.1 (13.8) mm and mean endoscopic size (SD) was 17.9 (10.1) mm, the correlation coefficients were 0.919 (P=0.000) and there was no significant difference between the two groups. Multivariate analysis showed that more than 20mm tumor size (OR, 3.419; 95% CI, 1.271-9.194, P=0.015) and atrophy (OR, 6.011; 95% CI, 2.311-15.633, P=0.001) was a risk factor for tumor size underestimation. **Conclusions:** There was no significant difference in pathologic and endoscopic size in SRC type EGC. Therefore ESD may be considered as a therapeutic option if the size of the tumor is less than 20 mm and atrophy is not present in the surrounding mucosa. **Keywords:** Early gastric cancer, Signet ring cell carcinoma, Endoscopic submucosal dissection

Fig. 1 Bland-Altman plots of pathologic and endoscopic size of signet ring cell type early gastric cancer.

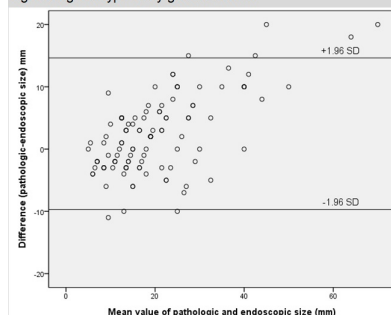


Table 1. Baseline characteristics of patients with diagnosed signet ring cell early gastric cancer.

| Characteristics, No. (%)       | Total patients (n=137) |
|--------------------------------|------------------------|
| Gender (male)                  | 70 (51.1)              |
| Mean Age (SD), y               | 55.3 (12.7)            |
| Treatment methods              |                        |
| Endoscopic resection           | 38 (27.7)              |
| Surgery                        | 99 (72.3)              |
| Macroscopic type               |                        |
| Elevated                       | 12 (8.7)               |
| Flat                           | 39 (28.5)              |
| Depressed                      | 86 (62.8)              |
| Mean pathologic tumor size, mm | 20.1 (13.8)            |
| Mean endoscopic tumor size, mm | 17.9 (10.1)            |
| Depth of invasion              |                        |
| Mucosa                         | 108 (78.8)             |
| Submucosa                      | 29 (21.2)              |
| Atrophy                        | 55 (38.7)              |
| Intestinal metaplasia          | 49 (35.8)              |
| Surface color                  |                        |
| Normal or erythema             | 55 (40.1)              |
| Whitish discoloration          | 82 (59.9)              |
| Gastric fold change            | 50 (36.5)              |
| Lymphovascular invasion        | 24 (17.5)              |

Table 2. Multivariate analysis of factors associated with the endoscopic tumor size underestimation

| Variables             | OR (95% CI)          | P value |
|-----------------------|----------------------|---------|
| Pathologic tumor size |                      | 0.015   |
| < 20 mm               | References (1.0)     |         |
| ≥ 20 mm               | 3.419 (1.271-9.194)  |         |
| Atrophy               |                      | 0.001   |
| Absent                | References (1.0)     |         |
| Present               | 6.011 (2.311-15.633) |         |
| Gastric fold change   |                      | 0.135   |
| Absent                | References (1.0)     |         |
| Present               | 1.583 (0.870-4.272)  |         |