

## The Evolving Role of Laparoscopy in the Staging and Treatment of Gastric Cancer

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Adenocarcinoma of the stomach remains as one of the leading causes of cancer deaths worldwide. Improvements in overall survival have been noted in recent years as the proportion of early gastric cancers diagnosed at presentation increases. However, advanced gastric cancer (AGC) continues to make up a large percentage of newly diagnosed gastric cancer patients. One advance in the management of advanced gastric cancer has been the introduction of video assisted laparoscopy into the routine pretreatment evaluation for this disease. Peritoneal metastases are common in gastric cancer and with the limited ability of modern imaging techniques to detect low volume implants surgery remains as the definitive means of staging gastric cancer. Even careful inspection at the time of open laparotomy can miss small implants leading to understaging. Early data from Memorial Sloan-Kettering and many other cancer centers have shown that modern video assisted laparoscopic staging has added value in the management of AGC particularly in the detection of low volume pelvic and sub diaphragmatic peritoneal disease. Moreover, laparoscopic peritoneal lavage with and without PCR assisted analysis, can further identify the subset of patients at risk for early peritoneal recurrence.

The advent of neoadjuvant therapy laparoscopy has taken on a major role in selecting patients for treatment. Laparoscopic ultrasound adds another dimension allowing for more accurate staging of the primary tumor prior to treatment and improving the examination of the liver and regional nodes.

Over the last few decades there has been a shift in stage presentation towards a greater proportion of pT1/pT2 and less pT3 tumors among resected gastric cancer. This change has prompted the need for a more selective use of laparoscopy recognizing the lower yield of occult M1 disease. Laparoscopy is emerging as a potentially legitimate treatment option particularly in the treatment of small early gastric cancers invading the submucosa. Improvement in our understanding of the natural history and progression of gastric cancer has supported the increasing use of laparoscopy for the staging and treatment gastric cancer and with the current trend its use is expected to increase in the coming years.