



Memorial Sloan-Kettering
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Update

IN GYNECOLOGIC ONCOLOGY

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The Use of Video-Assisted Thoracoscopic Surgery (VATS) to Evaluate the Extent of Pleural Effusion and Guide Primary Management Decisions in Patients with Newly Diagnosed Advanced Ovarian Carcinoma

JOHN P. DIAZ, MD
GYNECOLOGY SERVICE, DEPARTMENT OF SURGERY

In our previous report on video-assisted thoracoscopic surgery (VATS), we found that 65% of patients with suspected advanced ovarian cancer and moderate to large pleural effusions had intrathoracic disease identified on VATS, with the majority (11/15, 73%) having disease >1 cm in diameter [1]. The objective of our current study was to assess the utility of thoracoscopy in defining the extent of intrathoracic disease, its influence on primary management decisions, and a possible association with survival outcomes in patients with moderate to large pleural effusions at the time of diagnosis of advanced ovarian carcinoma.

We performed a retrospective review of all patients with untreated advanced ovarian carcinoma and moderate to large pleural effusions who underwent VATS at our institution between 6/01 and 10/08.

Forty-two patients met eligibility criteria. The group had a median age of 58 years (range, 41-81); CA-125 level of 1,747 U/ml (range, 73-20,888); and serum albumin of 3.9 g/dl (range, 2.3-4.6). VATS was performed for right-sided effusions in 30 patients (71%), with a median volume of 1,000 mL (range, 0-3,000) removed. Macroscopic pleural disease was found in 29 patients (69%), with >1 cm nodules in 18 (43%) and ≤1

cm nodules in 11 (26%). Of the 11 patients with negative cytology, macroscopic pleural disease was found in 4 (36%). Intrathoracic cytoreductive surgery was performed in 6 (33%) of the 18 patients with intrathoracic disease >1 cm (Table 1). After VATS, 29 (69%) of 42 patients underwent attempted primary abdominal surgical debulking, with cytoreduction to ≤1 cm achieved in 23 (79%). Thirteen patients (31%) received neoadjuvant chemotherapy. Twelve (92%) of these patients underwent interval cytoreductive surgery. Overall, the findings at VATS altered primary management in 18 cases (43%) based on the discretion of the attending physician. The 2-year progression-free survival (PFS) rate for the entire 40-patient cohort was 36%. Patients who were directed after VATS to neoadjuvant chemotherapy instead of primary surgical cytoreduction had a 2-year PFS rate of 22% compared to 42% for the primary cytoreductive group ($P = 0.36$) (Figure 1).

In patients with untreated advanced ovarian carcinoma and moderate to large pleural effusions, VATS identified macroscopic dis-

ease in nearly 70% of patients, some of whom had negative fluid cytology. In patients with no pleural disease suspected based on chest radiographs, macroscopic nodules >1 cm in size were found in greater than 40% of patients. Overall, management was altered based on VATS findings in 43% of cases.

REFERENCES

- Juretzka MM, Abu-Rustum NR, Sonoda Y, et al. The impact of video-assisted thoracic surgery (VATS) in patients with suspected advanced ovarian malignancies and pleural effusions. *Gynecol Oncol* 2007;104:670-4.

Table 1. Findings at VATS and pleural cytology (N = 42)

	Cytology Positive N (%)	Cytology Negative N (%)	Cytology not performed N (%)
Macroscopic disease	21 (78)	4 (36)	4 (100)
>1 cm	12 (44)	2 (18)	4 (100)
<1 cm	9 (33)	2 (17)	0 (0)
No evidence of disease	6 (22)	7 (64)	0 (0)
Totals	27 (64)	11 (26)	4 (10)

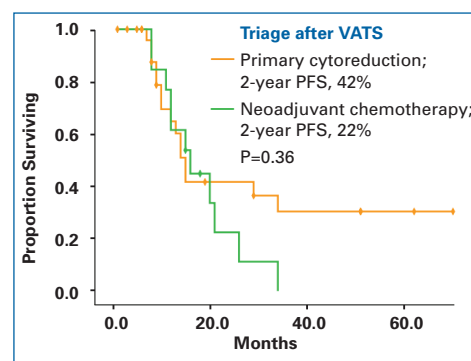


Figure 1. Progression-Free Survival
The median progression-free survival was 15.0 months. The 2-year progression-free survival rate for the group who underwent primary cytoreductive surgery was 42% compared to 22% for the neoadjuvant group ($P=0.36$).