

Ten years survival of FIGO Stage IIIC epithelial ovarian cancer cases due to lymph node metastases only

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Summary

Purpose of investigation: In this paper the authors have analyzed the long-term survival of women with Stage III ovarian cancer due to lymph node metastasis. **Materials and Methods:** This retrospective study included 27 patients with FIGO Stage IIIC epithelial ovarian carcinoma due to lymph node metastases observed consecutively at the Mangiagalli Clinic of Milan from 1982 to 2008. **Results:** Two cases had Fallopian tube carcinoma. A total of ten recurrences were observed. Median time to recurrence was 158 months. The five-year disease-free survival (DFS) was 57.7%. The ten-year corresponding value was 53.2%. Median survival time was 158 months, with median follow-up time of 169 months. The five-year (overall survival) OS rate was 77.1%; the ten-year rate was 55.4%. **Conclusion:** Women with ovarian cancer Stage IIIC due to nodal involvement have a five-year OS of about 80% and a ten-year OS of about 50%.

Key words: Ovarian cancer; Survival; Node metastases.

Introduction

According to the FIGO staging system, ovarian cancer patients with lymph node metastases, even if the primary tumor is confined to the ovary, are still classified in Stage IIIC (FIGO). These patients represent a low percentage of Stage III ovarian cancers, thus few studies have analyzed their survival [1-6]. Most of them have shown that Stage IIIC epithelial ovarian cancers classified solely by lymph node metastases have a more favorable prognosis than other types of Stage IIIC epithelial ovarian cancers. In particular, few data are available regarding long-term survival, which is the object of the present study.

Materials and Methods

This retrospective study included all patients at FIGO Stage IIIC epithelial ovarian carcinoma due to lymph node metastases observed consecutively at the Mangiagalli Clinic of Milan from 1982 to 2008. They were identified among a total of 1,120 ovarian cancer cases diagnosed and/or treated during the study period.

The inclusion criteria involved positive retroperitoneal lymph nodes in patients with disease apparently confined to the ovary. Patients with omentum, Douglas, and diaphragm metastases, also if microscopic, were not included. A total of 27 cases were identified.

Surgical staging included total hysterectomy, bilateral salpingo-oophorectomy, complete removal of the omentum, peritoneal washing, plus lymph node biopsies (seven cases), or total lymphadenectomy (20 cases).

A total of 25 cases were treated with first-line platinum-based chemotherapy, either alone or in combination with taxol or cyclophosphamide, for six cycles, according to the ongoing studies at the time of diagnosis. Second-line chemotherapy was also administered according to the ongoing studies at the time of diagnosis.

Median follow-up was updated on April 2010 and was 169 months. Overall survival (OS) and disease-free survival (DFS) were calculated from the date of surgery. Survival curves and rates were computed using the Kaplan-Meier method [7].

Results

Table 1 shows the characteristics of the study patients. Mean age at diagnosis was 54 years (range 30 to 73).

Twelve women had serous carcinoma (44.4%), two mucinous (7.4%), three endometrioid (11.1%), two clear cell (7.4%), and six mixed types (22.2%). A total of three cases had grade 1 tumor, one had grade 2, and 23 had grade 3 (85.2%). Two cases had Fallopian tube carcinoma.

During lymphadenectomy, the average number of lymph nodes removed was 13. Aortic lymph nodes were affected in 16 cases (59.3%), pelvic nodes in 19 cases (70.4%) and both in all cases. Two patients (7.4%) had metastases in the hypogastric nodes.

Cytoreductive surgery was optimal (residual tumor measured < 1 cm or absent) in all cases, except in one case. Cytology of peritoneal washing was positive in five patients. Twenty-two patients had complete response to chemotherapy, three patients had partial response, and two had no response. A total of ten recurrences were observed. The sites of recurrence included: iliac, aortic, inguinal, and cervical nodes (three cases); pelvis (three cases); liver, lung, spleen (two cases); peritoneum (one case); vagina (one case).

The five-year DFS was 57.7%. The ten-year corresponding value was 53.2%. A total of 13 deaths were observed; of these, three patients died for causes not related to neoplasia and had a brief survival after diagnosis. Median survival time was 158 months. The five-year OS rate was 77.1%, and the ten-year rate was 55.4% (Figure 1).

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Table 1. — Characteristics of the study subjects.

	No.	(%)
Age (years) (mean, range)	54	30-73
<i>Histologic type</i>		
Serous	12	(44.4)
Mucinous	2	(7.4)
Endometrioid	3	(11.1)
Clear cell	2	(7.4)
Mixed	6	(22.2)
Fallopian tube adenocarcinoma	2	(7.4)
<i>Grading</i>		
1	3	(11.1)
2	1	(3.7)
3	23	(85.1)

Discussion

The results of this study show that women with ovarian cancer Stage IIIC due to nodal involvement have a five-year OS of about 80% and ten-year OS of about 50%. This high survival rate is consistent with previous published studies showing a better survival in patients with Stage IIIC epithelial ovarian cancer based on nodal involvement only, than patients with the same Stage with abdominal disease and/or carcinomatosis [1-3].

Onda *et al.* [1] compared patients with ovarian cancer limited to the pelvis, but upstaged to Stage IIIC based on lymph node positivity vs patients with tumor limited to the pelvis and negative lymph node and patients with intraperitoneal tumor spread beyond the pelvis irrespective of lymph node status. That study showed that patients with intraperitoneal tumor limited to the pelvis and positive lymph nodes had fairly good five-year survival (84%). The survival difference between this group and the group with a tumor limited to the pelvis without nodal involvement was not statistically significant (84% vs 96%, $p = 0.107$). Additionally, the five-year survival of patients with nodal involvement and disease limited to the pelvis was significantly better than patients with intraperitoneal tumors spread beyond the pelvis at the same lymph nodal status (84% vs 26%, $p = 0.042$), although these two groups belonged to the same Stage IIIC according to FIGO staging.

Kanazawa *et al.* analyzed retrospectively 125 patients according to clinical, histological criteria, especially according to nodal status. Patients lymph node only upstaged to Stage IIIC had a better survival than patients classified as Stage IIIC because of abdominal disease larger than two cm at diagnosis ($p < 0.0001$) [2].

Cliby *et al.* [3] analyzed 115 patients with Stage IIIC epithelial ovarian cancer to describe the clinical behavior of occult Stage IIIC. In their series, 36 patients were upstaged to Stage IIIC by virtue of positive nodes and 69 patients were classified as Stage IIIC because of abdominal disease larger than two cm. The five-year survival of this study group was 76%.

In conclusion, this study shows a high long-term survival in women with Stage IIIC due to nodal involvement ovarian cancer.

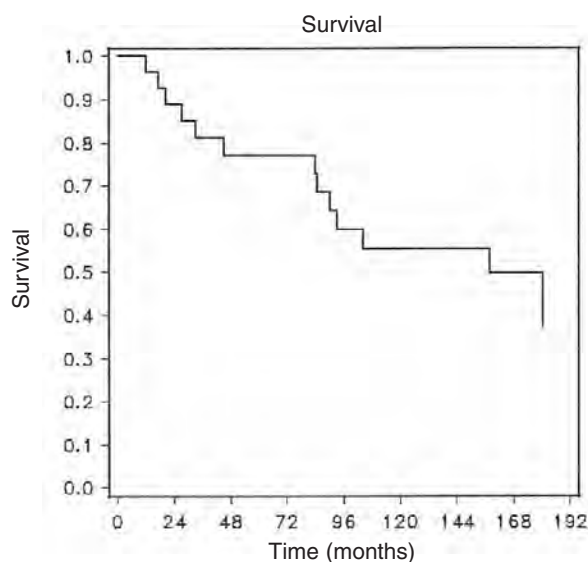


Figure 1. — Ten-year overall survival rate of the study subjects.

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