



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

Available online at: <http://www.iajps.com>

Research Article

AN ASSESSMENT OF OVARIAN CANCER FEMALE PATIENTS' DEATH AND SURVIVAL RATE AFTER SURGICAL INTERVENTION: NEOADJUVANT CHEMOTHERAPY VERSUS PRIMARY DEBULKING SURGERY

¹Dr Sidra Fatima, ²Dr. Mehwish Zulfiqar, ³Dr. Muhammad Usman Yousaf

¹Children Hospital Faisalabad, ²DHQ Gujranwala, ³Incharge Health Officer, Bhu 231/E. B District Vehari.

Article Received: December 2018

Accepted: February 2019

Published: March 2019

Abstract:

Objective: The main purpose of the study is to determine the survival and death rate of the female after surgical operation. This is determined by the two different methods of treatment between the females suffering from ovarian cancer.

Methods: The study arranged was of a retroactive type and it was held at Mayo Hospital, Lahore from February to September 2017. The study was associated with the data obtained in 1999 and 2008 about the female's treatment suffering from ovarian cancer. The clinical data obtained during the previous analysis was again studied and revised. And similar knowledge was obtained about the environmental, medical, therapeutically, pathological aspects of studies. Overall existence of patients was compared with growthfree existence. The comparison was made between patients who went either debulking surgery or neoadjuvant chemotherapy before surgery. Mathematical identification was performed by using SPSS.

Results: Total 118 patients were undergone surgical cure. Out of which 66% gained the primary debulking surgery and rest of the 34% received neoadjuvant chemotherapy. The average age and tumour antigen 125 level before treatment was same. In the debulking group, two stages of patients were identified. That group had 94.8% patients with stage 3 carcinoma and 5.1% stage 4 carcinoma. While in other groups the percentage of patients in stage 3 and 4 were 80% and 20% correspondingly. The most favourable occurrence of debulking was 56.8% in the earlier group as compared to 79.4% in the second group. At the time of surgery, the total loss of blood was recorded as 1500 ml. The loss of blood was almost the same in the different exhaustive care unit. In addition to the loss of blood, the rate of urinary swathe, bowel grievance and bowel reactions were also analogous. The growth free existence was also comparable in both groups.

Conclusion: Equivalent existence rates and peri-operative difficulties can be created by neo-adjuvant chemotherapy followed by intermission debulking.

Keywords: Ovarian epithelial cancer, Chemotherapy, Gynecological surgical procedure, Survival analysis.

Corresponding author:**Dr. Sidra Fatima,**

Children Hospital Faisalabad

QR code



Please cite this article in press Sidra Fatima et al., *An Assessment Of Ovarian Cancer Female Patients' Death And Survival Rate After Surgical Intervention: Neoadjuvant Chemotherapy Versus Primary Debulking Surgery.*, Indo Am. J. P. Sci, 2019; 06(03).

INTRODUCTION:

An ovarian tumour is a disorder mainly present in females. Its early identification is difficult because it shows very light and distracted cypher in the early phase. The other cause of its prevalence and severity is that there is no special test or device for its early identification [1, 2].

It starts showing it some symbols when it has prevailed to the upper part of the belly and outlying regions [3]. It was observed that disease reached to about 70% of its prevalence when it shows symptoms in case of stage-III and stage-IV. At this stage, only a 10% chance of survival of patients exists. The chances of survival can be enhanced if the disease can be identified at the early phase of growth. Chances could be improved to about 80-90% by early diagnosis [2, 3].

Recently, the most applicable cure for ovarian cancer which shows the best results is primary debulking surgery followed by chemotherapy. In debulking surgery overall hysterectomy of the belly with two-sided salping-oophorectomy, inclusive omentectomy and resection of any metastatic disorder are performed. Recovery of the patient depends on the capabilities of the medical doctor and level of disease. If the disease has been spread to the upper part of the belly and under-surface of the diaphragm than the optimal cytoreduction becomes complicated to perform. It has been found that the death rate increases due to such type of hindrance. But it has been explained by the observation of many studies that optimal cytoreduction is very significant future expecting factor for the livelihood of the patients [4 – 7].

The second frequently used treatment for ovarian carcinoma is neo-adjuvant chemotherapy with surgery. This is the special surgical impend for the widespread disorder. Because of methodological complexity and patient's medical death, entire therapeutical responses are not possible [8].

NACT has been proved an important optimal cytoreduction because it lessened the burden of cancer prior to surgical treatment. It also reduces the death rates and quantity of blood loss in patients. So, it decreases the reside of patient in exhaustive care unit and hospitals [4, 9 – 12].

Comparable conclusions were obtained when the European Organization for Research and Treatment of Cancer reports about the survival and growth-free survival compared between NACT and standard debulking surgery. The death rate was less in case of NACT group. So, it was considered that NACT can replace the debulking surgery [2, 13].

The main objective of organizing this study was to compare the death rates of Pakistani females suffering from ovarian carcinoma in two groups. It is predicted

that there is diversity in communal and financial aspects. Dietary status is also varying between the Pakistani and western patients. In this study, we compared the survival rate in females suffering from an ovarian tumour between primary debulking surgery and NACT followed by surgery and find out which treatment is more helpful.

PATIENTS AND METHODS:

The study arranged was of a retroactive type and it was held at Mayo Hospital, Lahore from February to September 2017. It was arranged after getting permission from institutional morals committee. The study included the data obtained between 1999 and 2008 about the females with ovarian carcinoma. Other females like early-stage ovarian tumour or patients suffering from synchronous primaries, non-epithelial ovarian tumours and those females in which an ovarian tumour is repeated again and again were not added in the study.

Females in both the groups were given the treatment with intravenous carboplatin and taxol-based chemotherapy. After 3 to 4 cycles of treatment, a notable changing observed in the patients for the capability of the therapy.

The verdict to treat a patient with PDS or NACT was presented in front of the tumour board jury. This jury consisting of gynaecological oncologist and clinical oncologist. This decision was made keeping in view some factors such as World Health Organization functional status of the patients, remedial co melancholic and on the fact that if the disease was hindered at the time of appearance. To find out the respectability of the disease, a central line imaging was needed like computed tomography of the chest, belly and pelvis bone. We can describe the unresectable disease as profound penetration of small bowel mesentery; disperse carcinomatosis consisting of the stomach and minute or bulky bowel; penetration of duodenum or fraction of the pancreas; and contribution of the liver parenchyma.

If TAH, BSO, omentectomy, hindrance of inflamed pelvic lymph knot and hindrance of implants were identified, standard debulking surgeries for both groups were recommended. Before starting the chemotherapy patients in the NACT group were investigated first. The investigation was established pathologically by tissue biopsies.

Substantial assessment, carcinoma antigen-125 amount and CT imaging were done repeatedly to recognize the reactions of the patients on various treatment methods after a regular period of time.

We can characterize the finest cytoreduction as no lasting disease or less than the 1cm lasting disease in maximal measurement at the last of therapy. The

disease can be divided by using the Intercontinental Federation of Gynecologists and Obstetrician dramatization scheme [15]. All type of environmental, medical, therapeutically, pathological and summarize knowledge was gained by revising all the clinical data and proceedings of the patients. Two groups of handling competed with each other between growthfree existence and overall existence. Some other parameters between these two groups also competed with each other. These included endurance rates before surgery, expected loss of blood, concern given to the victim during the surgical difficulties faced by patients such as bladder and bowel damage and complexities faced by patients after surgery like infections and thromboembolism.

Information was analyzed and recorded by using the SPSS. Chi-square analysis was used for comparing definite variables. Kaplan Meier Survival curves were used to engender the existence chances of the patients. In evocative information, to measure uninterrupted usually dispersed numbers averages and standard deviations were used. While non-normal allocation can be considered by median and range. For definite numbers, regularity and ratios were analyzed. Relationship of medical and pathological distinctiveness can be identified by either Pearson's chi-square test or Fisher exact test. Product-limit estimates were used to measure all median and life tables. Long-rank test was used to analyze curves. The

mathematically important value was measured as $P < 0.05$.

RESULTS:

Total 118 patients with ovarian carcinoma were selected. Out of these 66% received PDS and 34% were undergone treatment by NACT method.

The average age and CA-125 level before surgery were almost the same. 94.8% of patients belong to stage 3 and 5.1% to stage 4, in the case of debulking groups. While if we talk about the other groups 80% patients belongs to stage 3 and rest of the 20% belongs to stage 4 diseases. The average figure of neo-adjuvant cycles was 6. The papillary serous tumour was the most abundantly found carcinoma. It was present 72.7% in PDS groups and 89.7% in NACT group.

The time required for surgery expected the flow of blood during surgery which was about 1500ml and presence of a patient in the exhaustive care unit was also similar in different studies. The rate of urinary swathe, bowel grievance, and bowel responses was also comparable. Growth-free existence was also comparable in both the groups. The frequency of optimal debulking was slightly different in the two groups. It was calculated to be 56.8% in the earlier group and 79.4% in the second group.

Median existence result was calculated to be 30 months in NACT and 32 months in oDS group. In the same way, growth-free existence in two groups was also comparable.

Table – I: Overall PDS Versus NACT

PDS/NACT	Number	Percentage
PDS	78	66
NACT	40	34

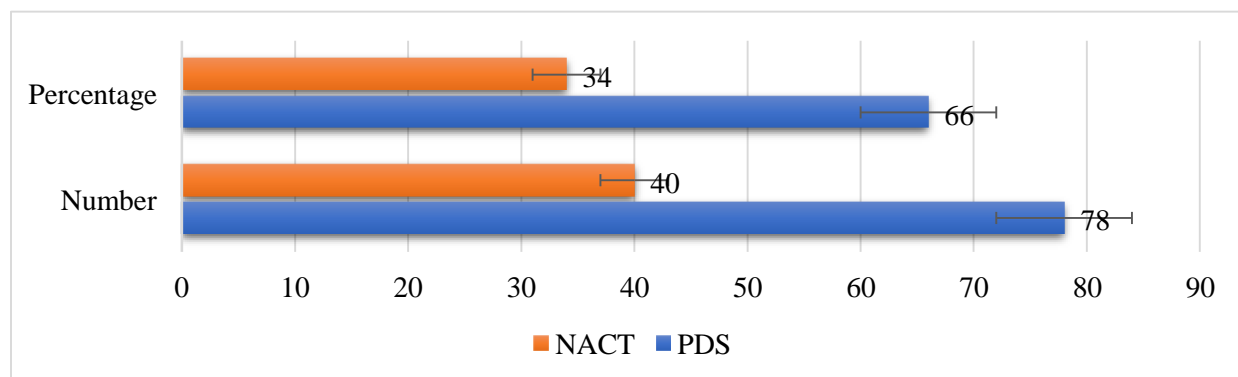


Table – II: Stage and History Features (PDS Versus NACT)

Characteristics (%)		PDS (78)	NACT (40)
Stage	Stage – III	94.8	80.0
	Stage – IV	5.1	20.0
History	Serous	72.7	89.7
	Mucinous	6.1	3.4
	Endometroid	16.7	6.9
	Clear Cell	3.0	0.0

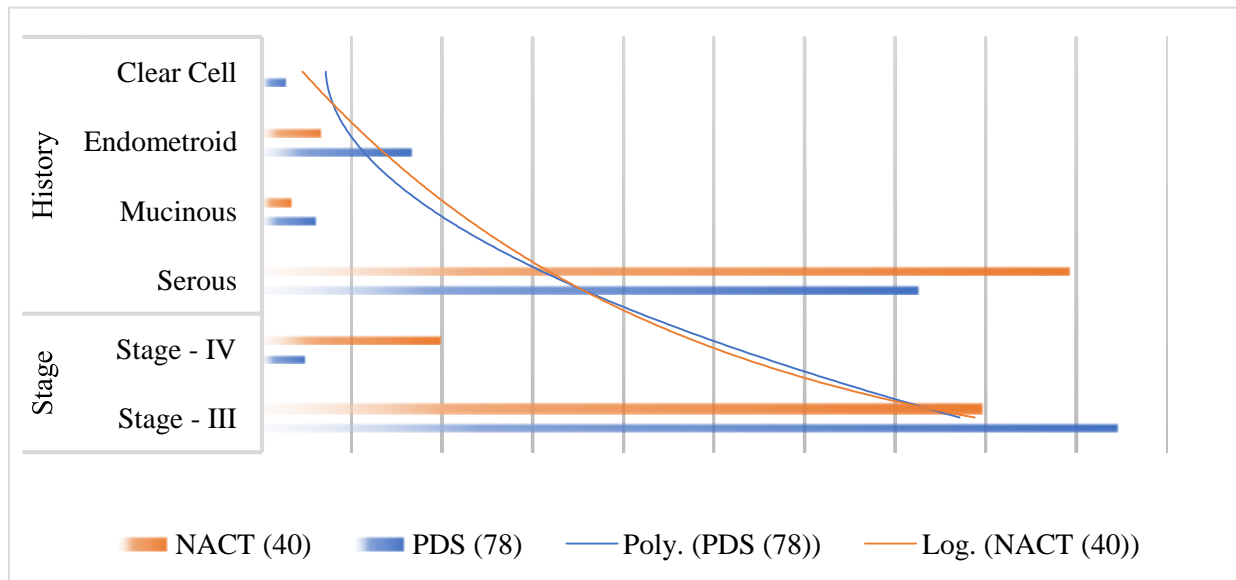


Table – III: Average Values (PDS Versus NACT)

Average Values	PDS (78)		NACT (40)	
	Mean	±SD	Mean	±SD
Age	50.99	13	52.45	11.3
Ca-125	1954	2762.4	1909	2486.4
Surgical Time	222	185.3	222	196.6
Blood Loss	848	467.5	874	517.3
Hospitalization	2.5	2.16	2.89	3.7

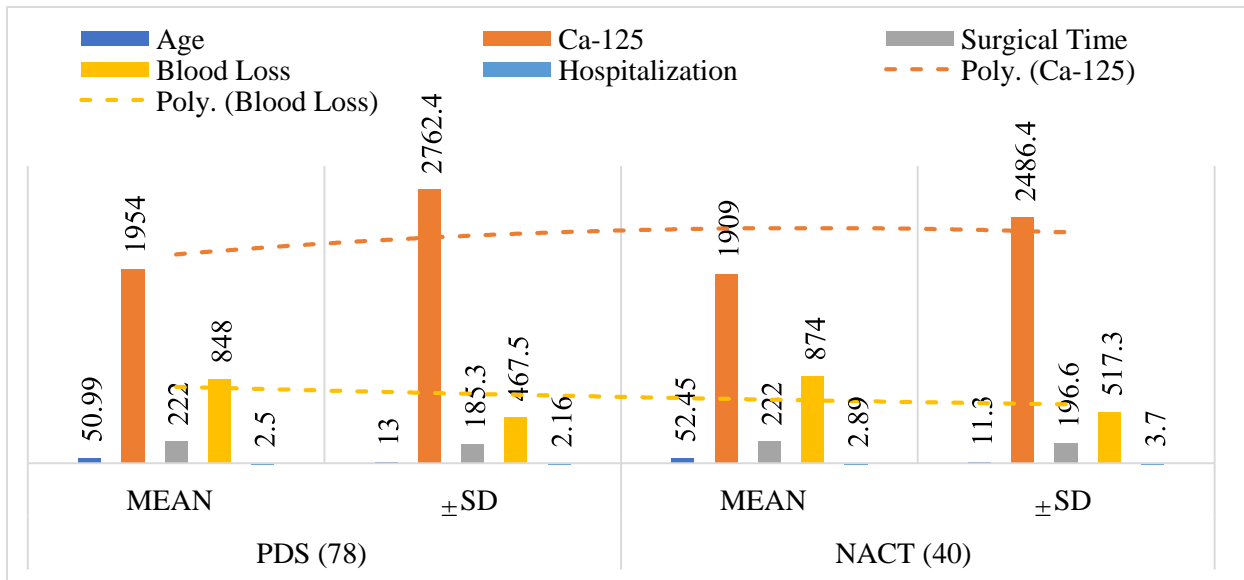
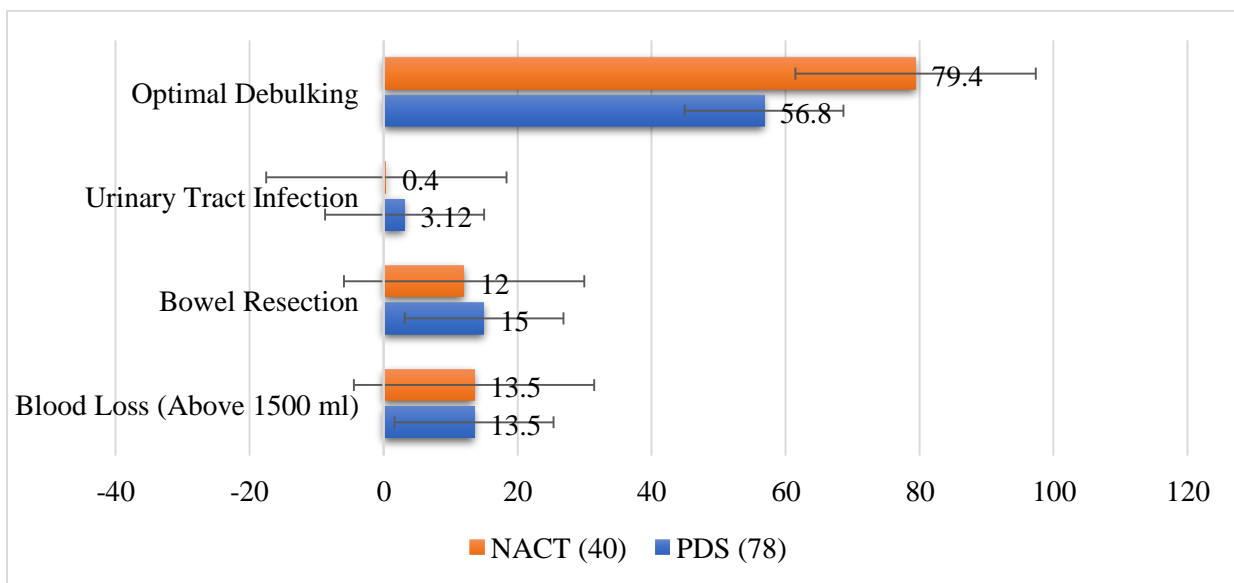


Table – IV: PDS Versus NACT (Various Features)

Characteristics	PDS (78)	NACT (40)
Blood Loss (Above 1500 ml)	13.5	13.5
Bowel Resection	15	12
Urinary Tract Infection	3.12	0.4
Optimal Debulking	56.8	79.4



PDS: Primary debulking surgery
 NACT: Neo-adjuvant chemotherapy

DISCUSSION:

Overall cytoreduction of carcinoma is the major purpose of the surgery of epithelial ovarian tumour. The strength of remaining disease after cytoreduction was negatively related to the existence of patients which was inveterate by meta-analysis of about 6000 victims of the disease [5, 6, 16]. It is a common perception that suboptimal cytoreduction does not give any survival facilities to the females who are suffering from sophisticated stages of carcinoma. So optimal cytoreduction should be used for better results. The optimal cytoreduction depends mainly on the abilities and skills of the doctors but still, it is affordable because it increases the chances of survival [17, 18]. The Gynecologic Oncology Group describes the most favourable cytoreduction as parting utmost of 1cm remaining disease. While on another hand whole cytoreduction means total clearance of remaining disease. It may involve more intense and aggressive surgical methods. So, it may cause the additional flow of blood during surgery, more time required for surgery and quantity of blood transfused [19].

debulking surgery followed by chemotherapy is considered to be the better treatment for ovarian carcinoma from the previous 30 years. But now different other methods gained popularity; Different surgical methods have been used now a day for the patients who are not well medically or those whose disease has been spread to a large extent. After completion of three to six cycles of NACT debulking surgery is performed in these victims. To compare the primary debulking followed by chemotherapy and NACT followed by debulking many observations were made. Chemotherapy and EORTC also competed with these two treatment methods. They also show similar chances of survival in both groups. It was concluded that the morbidity rate is less in NACT patients followed by debulking surgery [2, 13].

An association was also observed between NACT and longer existence rate according to the reports of some studies [20, 21]. Demographic history was the same according to our observations in both groups. Intra-operative and post-operative parameters were also similar in both groups according to our study. It has been identified that blood loss and residence in ICU is also the same in both cases. Previous studies also show comparable results [4, 21, 22].

In our observations, the major cytoreduction rate for PDS was 56.8% and 79.4% for NACT. These results were important and similar to other studies [9, 23]. The pre-operative CA-125 rate was comparable in our study although there exists a variation in optimal cytoreduction. No comparison between the existence rates was identified in our study. Operation of the

upper part of the belly is difficult to perform in our study which is also a weak point of our study.

CONCLUSION:

Similar existence rates and complexities before the operation, most favourable debulking was obtained by NACT followed by intermission debulking. It can be conveniently supposed in a group of patients having poor workings, clinical comorbidities and unhindered disease at the time of appearance.

REFERENCES:

1. Chi DS, Musa F, Dao F, Zivanovic O, Sonoda Y, Leitao MM, et al. An analysis of patients with bulky advanced stage ovarian, tubal, and peritoneal carcinoma treated with primary debulking surgery (PDS) during an identical time period as the randomized EORTC trial of PDS vs. neoadjuvant chemotherapy (NACT). *Gynecol Oncol* 2012; 124:10-4.
2. Chi DS, Franklin CC, Levine DA, Akselrod F, Sabbatini P, Jarnagin WR, et al. Improved optimal cytoreduction rates for stages III C and IV epithelial ovarian, fallopian tube, and primary peritoneal cancer: a change in surgical approach. *Gynecol Oncol* 2004; 94: 650-4.
3. Vergote I, DeWever I, Tjalma W, Van Gramberen M, Decloedt J, van Dam P. Neoadjuvant chemotherapy or primary debulking surgery in advanced ovarian carcinoma: a retrospective analysis of 285 patients. *Gynecol Oncol* 1998; 71:431-6.
4. Kuhn W, Rutke S, Spathe K, Schmalfeldt B, Florack G, von Hundelshausen B, et al. Neoadjuvant chemotherapy followed by a tumour debulking prolongs survival for patients with poor prognosis in International Federation of Gynecology and Obstetrics Stage III C ovarian carcinoma. *Cancer* 2001; 92:2585-91.
5. Schwartz PE, Rutherford TJ, Chambers JT, Kohorn EI, Thiel RP. Neoadjuvant chemotherapy for advanced ovarian cancer: long-term survival. *Gynecol Oncol* 1999; 72:93-9.
6. Onnis A, Marchetti M, Padovani P, Castellan L. Neoadjuvant chemotherapy in advanced ovarian cancer. *Eur J Gynaecol Oncol* 1996; 17:393-6.
7. Bristow RE, Eisenhower EL, Santillan A, Chi DS. Delaying the primary surgical effort for advanced ovarian cancer: a systematic review of neoadjuvant chemotherapy and interval cytoreduction. *Gynecol Oncol* 2007; 104:480-90.
8. Hunter RW, Alexander ND, Soutter WP. Metanalysis of surgery in advanced ovarian carcinoma: is maximum cytoreductive surgery an

- independent determinant of prognosis? Is J Obstet Gynecology 1992; 166:504-11?
9. Frei E 3rd. Clinical cancer research: an embattled species. *Cancer* 1982; 50:1979-92.
 10. Kayikcioglu F, Kose MF, Boran N, Caliskan E, Tulunay G. Neoadjuvant chemotherapy or primary surgery in advanced epithelial ovarian carcinoma. *Int J Gynecology Cancer* 2001; 11: 466-70.
 11. Schwartz PE, Chambers JT, Makuch R. Neoadjuvant chemotherapy for advanced ovarian cancer. *Gynecology Oncol* 1994; 53:33-7.
 12. Baekelandt M. The potential role of neoadjuvant chemotherapy in advanced ovarian cancer. *Int J Gynecol Cancer* 2003; 13 Suppl 2: 163-8.
 13. Huober J, Meyer A, Wagner U, Wallwiener D. The role of neoadjuvant chemotherapy and interval laparotomy in advanced ovarian cancer. *J Cancer Res Clin Oncol* 2002; 128:153-60.
 14. Vergote I, Trope CG, Amant F, Kristensen GB, Ehlen T, Johnson N, et al. Neoadjuvant chemotherapy or primary surgery in stage IIIC or IV ovarian cancer. *N Engl J Med* 2010;363:943-53.
 15. World Health Organization 2001. The International Classification of Functioning DaHIGWh twice. (Online) (Cited 2014 October 14). Available from: URL: <http://www.who.int/classifications/icf/en/>.
 16. Zeppernick F, Meinhold-Heerlein I. The new FIGO staging system for the ovarian, fallopian tube, and primary peritoneal cancer. *Arch Gynecol Obstet* 2014; 290:839-42.
 17. Chi DS, Liao JB, Leon LF, Venkatraman ES, Hensley ML, Bhaskaran D, et al. Identification of prognostic factors in advanced epithelial ovarian carcinoma. *Gynecol Oncol* 2001; 82:532-7.
 18. Morice P, Brehier-Olive D, Rey A, Atallah D, Lhomme C, Pautier P, et al. Results of interval debulking surgery in advanced stage ovarian cancer: an exposed-non-exposed study. *Ann Oncol* 2003; 14: 74-7.
 19. Cannistra SA. Cancer of the ovary. *N Engl J Med* 2004; 351: 2519-29.
 20. Hou JY, Kelly MG, Yu H, McAlpine JN, Azodi M, Rutherford TJ, et al. Neoadjuvant chemotherapy lessens surgical morbidity in advanced ovarian cancer and leads to improved survival in stage IV disease. *Gynecol Oncol* 2007;105:211-7.
 21. Du Bois A, Quinn M, Thigpen T, Vermorken J, Avail-Lundqvist E, Bookman M, et al. 2004 consensus statements on the management of ovarian cancer: final document of the 3rd International Gynecologic Cancer Intergroup Ovarian Cancer Consensus Conference (GCI/OCCC 2004). *Ann Oncol* 2005; 16 Suppl 8: viii7-viii12.
 22. Schwartz PE. Neoadjuvant chemotherapy for the management of ovarian cancer. *Best Pract Res Clin Obstet Gynaecol* 2002; 16: 585-96.
 23. Griffiths CT. Surgical resection of tumour bulk in the primary treatment of ovarian carcinoma. *Natl Cancer Inst Monogr* 1975; 42:101-4.