

Ovarian Cancer at Monongalia General Hospital 2007-2016

This report is to describe our experience with ovarian cancer as reported and compared in the NCDB benchmark reports (2007-2016).

Cancers of the ovary are the 8th most common type of malignancy in women comprising more than 22,000 new cases each year in the United States. Unfortunately, it is the most deadly gynecologic malignancy in that over 14,000 women were estimated to die in 2016, and less than 50% will be alive at 5 years after diagnosis. (SEER Cancer Statistics)

The increased mortality of ovarian cancer is directly associated with the fact that most patients will be diagnosed at an advanced stage, with 15% being stage I as prognosis correlates with stage. Symptoms of ovarian cancer are vague – abdominal or pelvic pain, bleeding, urinary frequency, and typically arise when the cancer is already beyond stage I. Moreover, effective screening modalities are lacking, with serial pelvic US and CA125 values not demonstrating any improvement in overall survival in patients at normal risk for the disease. Diagnosis is usually made on imaging and laboratory values and confirmed with pathology either via biopsy or surgery.

Nearly all patients with ovarian cancer will be treated with surgery and chemotherapy. Radiation therapy is rarely used for ovarian cancer treatment. Surgery provides accurate pathologic staging and the opportunity to cytoreduce the volume of tumor to least amount of disease. An optimal cytoreduction means the volume of residual tumor after surgery is less than 1 cm at any site. Overall survival is directly associated with the amount of residual disease, so that those with microscopic amounts of disease have the best overall prognosis.

Chemotherapy is recommended for adjuvant therapy in nearly all stages, except in only the earliest stage and lowest grades of tumor. Chemotherapy may be delivered intravenously, intraperitoneally or both. In some patients, chemotherapy may actually be given before surgery as neoadjuvant chemotherapy. This may be ideal for patients who may not tolerate an aggressive surgical debulking or not be able to have all of the cancer removed at the time of surgery due to location and amount metastatic disease.

We evaluated ovarian cancer at Monongalia General Hospital from 2007-2014 and compared it to other Comprehensive Community Cancer Program Hospitals in

ACS Division of the South Atlantic, a total of 97 hospital. Our statistics were fairly comparable on all accounts. The details will be reviewed here. There were a total of 140 cases of ovarian cancer identified. The other 97 hospitals had a total of 5041 cases, giving an average of 52 per hospital. The majority of patients were diagnosed in the 60-69 year age group, comprising 34% of all patients diagnosed. The 50-59 age group made up 24% of the patients. Patients 40-49 years comprised 15%, slightly higher than the comparable group which was <10%, and the 70-79 age group made up 14% of the patients. There were less patients older than 80 at our institution, 4% versus 13%. Essentially 87% of the patients diagnosed were from age 40-79.

The majority of patients were diagnosed with Stage III cancer, 69 patients, or 49%. Forty-one patients (29%) were diagnosed with Stage I cancer and 12 (9%) with Stage II cancer. Seventeen patients (12%) were diagnosed with Stage IV and one patient had an unknown stage at the time of this report.

The histologic subtypes of cancers at the other institutions include a total of 68 categories. At both Monongalia General Hospital and the other institutions, the most common subtypes were serous and papillary serous cystadenocarcinoma at 20% vs 19%, respectively for the serous and 19% for papillary serous. Mixed cell adenocarcinoma accounted for 17% at our institution compared to 3% at others. The other institutions 3rd most common subtype was adenocarcinoma, NOS at 15% compared to 4% at our institution, which may just represent a collection of similar cases that are categorized differently given the lack of many very rare subtypes at our institution. Mucinous adenocarcinomas were diagnosed 12% of the time at our institution compared to 3% at others. Other rates at our institution included serous surface papillary carcinoma at 7%, clear cell adenocarcinoma, NOS at 4%, mucinous cystadenocarcinoma at 4%, malignant granulosa cell tumor at 3%, and approximately 1% of cases of mucinous adenocarcinoma, endocervical type, cystadenocarcinoma, NOS, neuroendocrine carcinoma, carcinoma (NOS), and neoplasm (NOS).

The majority of patients were treated with debulking/cytoreductive surgery (47%) at our institution compared to 27% at others. Thirty-six percent of patients received unilateral or bilateral salpingo-oophorectomy with omentectomy, NOS, partial or total alone at our institution compared to 25% at others. At other institutions, 25% had no surgery of the primary site compared to 5% at our institution. A hysterectomy with bilateral salpingo-oophorectomy was performed on 9% of

patients at our institution compared to 15% at others. Pelvic exenteration was performed about 1% of the time at both.

In terms of adjuvant therapy beyond surgery, 81% of patients received some form of therapy compared to 69% at other institutions. This was chemotherapy alone 73% of the time here compared to 66% at others. Five percent received chemotherapy and immunotherapy here compared to <1% at others, and hormone therapy in combination with chemotherapy was given to 2% here compared to <1% at others. Systemic therapy NOS was given to 1% of patients at both sites.

In considering the first course of treatment, which includes all treatments such as surgery, chemotherapy, hormone therapy, and radiation therapy, 70% of patients at our institution had surgery and chemotherapy at our institution compared to 20% at others. There were 4% that received surgery, chemotherapy and biological response modifier at our institution compared to <1% at others.

These data demonstrate that for women diagnosed and treated with ovarian cancer, our institution compares favorably to comprehensive community cancer program hospitals in ACS Division of South Atlantic. The number of women we see and treat is actually greater than the presumed average for each hospital included in that group. Moreover, the majority of patients, stage for stage, receive multimodal treatment, specifically surgery and chemotherapy. Per CQIP report, our program projections for ovarian cancer for the performance of salpingo-oophorectomy with omentectomy, debulking/cytoreductive surgery or pelvic exenteration for Stage I-IIIc is 88.24% for 2016, exceeding state (79.4%) and census (70.2%) regions.