

# Fatigue in Women Receiving Intraperitoneal Chemotherapy for Ovarian Cancer

## A Review of Contributing Factors

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Women diagnosed with stage III or IV ovarian cancer typically are treated with surgery followed by chemotherapy. Intraperitoneal (IP) chemotherapy, the direct administration of chemotherapy into the IP cavity, has been explored as a viable treatment option for some women with advanced ovarian cancer. Fatigue may occur as a result of the disease process, treatment, or a wide variety of physical, psychological, or situational factors. Fatigue is one of the most common and distressing side effects associated with chemotherapy and it may be intensified in women receiving IP chemotherapy. The purpose of this article is to examine fatigue in women receiving IP chemotherapy for advanced ovarian cancer and to examine what aspects of IP chemotherapy may contribute to fatigue development. Factors reviewed include surgery for debulking the tumor and placement of the IP catheter, administration of IV chemotherapy in addition to IP chemotherapy, pain, anemia, sleep disturbances, gastrointestinal disturbances, and emotional distress. Oncology nurses who are knowledgeable about the factors that contribute to fatigue in women receiving IP chemotherapy will be better prepared to conduct a comprehensive assessment and develop effective treatment strategies.

**O**varian cancer is the fourth-leading cause of cancer deaths among women (Jemal et al., 2008). An estimated 21,650 women will be diagnosed and 15,520 will die from the disease (Jemal et al.). Of the various types of ovarian cancer, epithelial ovarian cancer accounts for 90% (Harries & Gore, 2002), with most diagnoses occurring in stages III or IV. Even with a strong initial clinical response, the overall five-year survival rate for advanced ovarian cancer is only 30% (Jemal et al.). Women diagnosed with stage III or IV ovarian cancer typically are treated with surgery followed by chemotherapy; modalities that may expose women to significant toxicities. Women diagnosed with advanced disease, therefore, face the possibility of dying from the disease and experience the debilitating symptoms of treatment-related toxicities.

Ovarian cancer usually is confined to the abdomen upon initial diagnosis and during recurrence. Because of this, intraperitoneal (IP) chemotherapy has been explored as a viable treatment approach for women with optimally cytoreduced stage III disease (Armstrong et al., 2006; Jaaback & Johnson, 2006; Rothenberg et al., 2003). IP chemotherapy involves the administration of chemotherapy agents directly into the IP cavity via an abdominal port-a-cath (Almadrones, 2007). In a landmark study, the Gynecologic Oncology Group (GOG) reported significant improvements in median progression-free survival of 5.5 months and an overall survival rate increase of 15.9 months in women with advanced ovarian cancer receiving IP chemotherapy (Arm-

### At a Glance

- ◆ Women with advanced ovarian cancer receiving intraperitoneal (IP) chemotherapy may be at increased risk for developing fatigue, which may be intensified in this population.
- ◆ Multiple factors contribute to fatigue development, including surgery for debulking tumors, placement of IP catheters, chemotherapy administration, pain, anemia, sleep disturbances, gastrointestinal disturbances, emotional distress, and reduced physical activity.
- ◆ Oncology nurses play an integral role in assessing fatigue, implementing interventions to mitigate the impact, and evaluating the efficacy of interventions.

strong et al.). In response to studies examining the role of IP and IV chemotherapy, the National Cancer Institute (NCI, 2006b) issued a clinical announcement recommending that women

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