



Peri-operative ovarian cancer guidelines: anesthesia, intra- and post-operative volume and replacement, post-operative pain management, frailty scores/management of the fragile patient

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Biography: Christina Fotopoulou is the Professor of Gynaecological Cancer Surgery in the Department of Surgery and Cancer, Faculty of Medicine of Imperial College London, UK. She is the Deputy director of the Ovarian Cancer Action Research Centre at Imperial College. She holds an honorary chair in the Gynaecology Department at the Charite' University of Berlin, where she was trained and then later took the role of the Vice Director of the Gynecological Department. Her surgical and scientific expertise focuses on the management of patients with advanced and relapsed ovarian cancer, profiling of tumor heterogeneity and integration of tumor biology factors with surgical effort under the umbrella of individualization of surgical care. She has served as the Chair of the guidelines committees of the British Gynaecological Cancer Society (BGCS) and of ESGO (European Society of Gynaecologic Oncology). She has been an elected member of the ESGO Council and is also a member of the German AGO-Ovarian Cancer Group. She is on the editorial board and reviewer of numerous international gynaecological and oncological journals and is a member of various international oncological committees, including BGCS, ASCO, ESGO, IGCS, ESMO, ENGOT, AGO, SGO and NOGGO.

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For 'Presented at statement' see end of article.

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The close involvement of anesthetists in the peri-operative care of patients undergoing surgery for ovarian cancer is essential for overall safety and high quality of care. Anesthetists are involved in the pre-operative assessment and optimization

of patients, intra-operative care including fluid, blood, and blood product replacement, and in the management of post-operative pain (Figure 1).

Patients undergoing surgery for ovarian cancer should routinely undergo a pre-operative

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- Epidurals provide the best analgesia and may have additional benefits including reduced cardiovascular, respiratory and GI complications
- Failure of epidural and hypotension may occur
- Intrathecal analgesia is an alternative to epidurals but single-shot technique
- Abdominal wall nerve blocks may be considered



Figure 1 Multiple methods of analgesia are nowadays available for ovarian cancer patients undergoing cytoreductive procedures. A multidisciplinary, specialist approach is key to success and adequate peri-operative pain management.



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Video 1 Multiple methods of analgesia are nowadays available for ovarian cancer patients undergoing cytoreductive procedures. A multidisciplinary, specialist approach is key to success and adequate peri-operative pain management.

evaluation including a frailty assessment to estimate how well the surgery will be tolerated and to quantify the risk of post-operative complications.¹ Pre-operative assessment should include screening for anemia; if a patient has iron deficiency anemia, pre-operative iron therapy should be considered. As oral iron is poorly absorbed from the duodenum and is associated with side effects, intravenous iron should be favored.²

Peri-operative fluid replacement can be challenging because of a combination of pre-operative dehydration and extensive fluid losses intra- and post-operatively, especially in patients with high volume ascites and pleura effusion. Routine fluid replacement should be with a balanced crystalloid solution, and this may be guided by cardiac output monitoring as part of a goal-directed algorithm.³ In extensive multivisceral resections, particularly in patients with gross ascites, administration of fresh frozen plasma may provide greater hemodynamic stability and pre-empt a dilutional coagulopathy from use of large volumes of crystalloid. There is no well-defined hemoglobin threshold for blood transfusion, but since many patients need chemotherapy post-operatively, a liberal transfusion threshold may be considered. Although serum albumin is a useful marker of nutritional status, there is no nutritional value

in administering intravenous albumin during the peri-operative period. If a patient has low serum albumin pre-operatively, she should be considered for pre-operative nutritional support. Tranexamic acid reduces surgical blood loss and should be part of the intra-operative algorithms.⁴ Intra-operative cell salvage is not at present routinely recommended in ovarian cancer cytoreductions.

A multimodal approach to post-operative pain management, including systemic medication that affects different aspects of the pain pathway combined with regional analgesic techniques, are key to success.⁵ The use of systemic opioids should be minimized. Paracetamol and non-steroidal anti-inflammatory drugs should be used routinely in the absence of well-defined contraindications. Epidurals potentially offer the best analgesia for ovarian cancer surgery provided they work well, and they may reduce peri-operative cardiovascular, respiratory, and gastrointestinal complications.⁶ However, they may cause hypotension from sympathetic blockade which may require additional fluids and/or a vasopressor infusion. Intrathecal analgesia with the use of long-acting spinal opioids is an alternative, though it has a shorter duration of action compared with epidurals. A locoregional abdominal wall block

such as the transversus abdominis plan (TAP) block may also be considered.

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