

TriNetX healthcare organization (HCO) networks in the US (TNX-US) and EMEA (TNX-EMEA) to analyze the impact of endometriosis as a risk factor for the development of EC.

Methodology Using TriNetX Platform, we defined a cohort of 284,287 patients with endometriosis and at least 6 months of follow up at the HCO, 254,726 from TNX-US and 29,561 TNX-EMEA. Propensity score matching between these cohorts and the female control cohorts in each regional network was used to remove the possible confounding effects of age, body mass index (BMI), previous diagnosis of pelvic inflammatory disease, breast cancer, other cancer of female genital organs or genetic susceptibility to cancer. Hazard ratio (HR) was used to compare the incidence of EC between the matched cohorts. Kaplan Meier analysis was used to compare the overall survival (OS) of EC patients with previous endometriosis vs those without endometriosis patients after propensity score matching. The time window of observation in both analyses was 10 years.

Results Patients with endometriosis diagnosis had a higher risk of developing EC in both TNX-US (2,151/237,034 vs 620/238,837, HR 3.49, 95% CI 3.19–3.82) and TNX-EMEA (319/28,241 vs 41/28,282, HR 7.58, 95% CI 5.48–10.50). The OS of EC patients with endometriosis was demonstrated to be significantly better than those without endometriosis: the 10-year OS probability was 78.37% vs 62.41% ($p < 0.01$) and 73.11% vs 49.61% ($p < 0.01$), in TNX-US and TNX-EMEA, respectively.

Conclusion Our RWD supports the association between endometriosis and an increased risk of developing EC. Endometriosis-associated tumors appear to have a better prognosis.

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TriNetX contributed in the collection and analyses of the data, but had no role in interpretation of data, in the writing of the manuscript, or in the decision to present the results.

06. Ovarian cancer

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INFLUENCE OF PREDICTIVE FEATURES ON THERAPY RESPONSE AND SURVIVAL IN HIGH-GRADE SEROUS OVARIAN CANCER PATIENTS BY GERMLINE BRCA MUTATION STATUS: AN UPDATE FROM THE AUSTRALIAN OVARIAN CANCER STUDY

^{1,2}Tibor A Zwimpfer*, ^{1,3}Sian Fereday, ¹Dinuka Ariyaratne, ¹Laura Twomey, ^{1,3}Nadia Traficante, ⁴Ellen L Goode, ^{5,6,7}Anna Defazio, ^{1,3}David DL Bowtell, ^{1,3}Dale W Garsed. ¹Peter MacCallum Cancer Centre, Melbourne, Australia; ²University Hospital Basel, Department of Gynaecological Oncology, Basel, Switzerland; ³Sir Peter MacCallum Department of Oncology, University of Melbourne, Melbourne, Australia; ⁴Division of Epidemiology, Department of Quantitative Health Sciences, Mayo Clinic, Rochester, USA; ⁵The Westmead Institute for Medical Research, Sydney, Australia; ⁶Department of Gynaecological Oncology, Westmead Hospital, Sydney, Australia; ⁷The Daffodil Centre, The University of Sydney, a joint venture with Cancer Council NSW, Sydney, Australia

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Introduction/Background Pathogenic germline BRCA1 and BRCA2 (BRCA) variants are frequent in high-grade serous

ovarian cancer (HGSOC). Age, tumor stage, and residual disease are known predictors of survival. However, it is not clear whether these associations differ by BRCA variant status. We examined the association between clinicopathological features and survival by BRCA status, in a large cohort of HGSOC patients.

Methodology We evaluated clinicopathological and germline DNA sequencing data on 1,405 patients with HGSOC from 17 Australian treatment centres, enrolled into the Australian Ovarian Cancer Study between 2002–2023. Multivariate Cox proportional hazards models and logistic regression analysis were used to assess the association between prognostic factors and outcomes by BRCA status.

Results The study population consisted of 1,112 (79.1%) non-carriers and 293 (20.9%) BRCA mutation carriers. Age, FIGO stage, BRCA status, primary site and residual disease showed a significant association with survival after risk factor adjustment. Non-carriers with residual disease showed a poorer overall survival compared to non-carriers with no residual disease ($p < 0.001$, HR: 2.10, 95%CI: 1.75–2.50), whereas there was no significant difference in survival for patients with BRCA germline alterations with or without residual disease ($p = 0.188$ and 0.221 , HR: 1.17 and 0.8, 95%CI: 0.91–1.50 and 0.57–1.10, respectively). Patients with primary peritoneal carcinoma had a poorer survival than those with primary ovarian HGSOC ($p = 0.002$, HR: 1.33, 95%CI: 1.11–1.60). Patients with protein-truncating BRCA mutations had a better survival than those with splice-site, missense or structural variants ($p < 0.001$). The results of the logistic regression analysis model aligned with the multivariate cox regression model.

Conclusion Our results suggest that the adverse effect of residual disease is stronger for non-carriers compared to patients with a germline BRCA mutation. Thus, while optimal debulking improves outcomes for all patients with HGSOC, it may be particularly important to achieve no residual disease for non-carriers.

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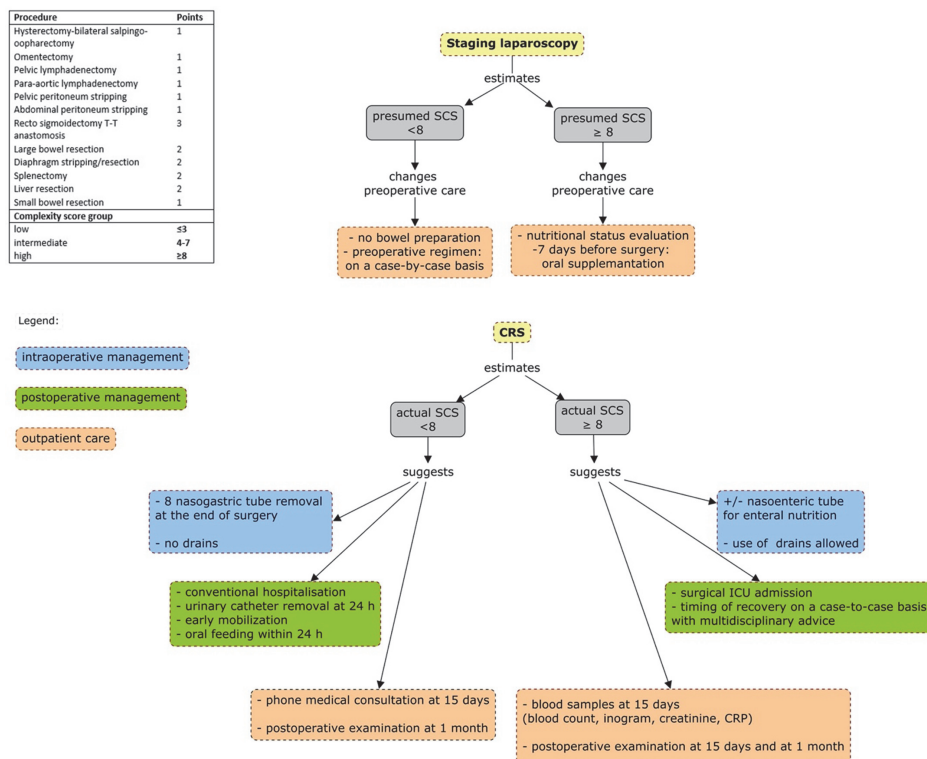
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PROPOSITION OF A TAILORED PERIOPERATIVE-CARE ALGORITHM FOR PATIENTS WITH ADVANCED-STAGE OVARIAN CANCER, BASED ON THE SURGICAL COMPLEXITY SCORE (ALETTI SCORE)

^{1,2}Elisa Scarpelli*, ^{3,1}Lucie Longuepée-Bourdon, ⁴Camille Godart, ⁴Aurélie Lafanechere, ⁴Maxime Riquet, ¹Mathilde Duchatelet, ⁵Matthieu De Codt, ¹Manon Lefebvre, ¹Carlos Martinez-Gomez, ¹Fabrice Narducci, ¹Delphine Hudry. ¹Department of Gynecologic Oncology, Centre Oscar Lambret, Lille, France, Lille, France; ²Department of Medicine and Surgery, University Hospital of Parma, 43125 Parma, Italy, Parma, Italy; ³Medicine faculty, Henri Warembourg, Lille University, Lille, France; ⁴Department of Anesthesiology, Centre Oscar Lambret, Lille, France, Lille, France; ⁵Department of Gynecology, University Hospital of Namur-Godinne, Namur, Belgium, Lille, France

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Introduction/Background Advanced ovarian cancer (AOC) treatment requires extensive surgical procedures. The reported frequency of complications following cytoreductive surgery (CRS) ranges from 10 to 20%. Depending on the number of



Abstract #454 Figure 1 Perioperative-care algorithm for patients with advanced-stage ovarian cancer based on the Surgical Complexity Score (Aletti score)

surgical gestures performed, the Surgical Complexity Score (SCS) defines three levels of complexity, low (≤ 3), intermediate (4–7), and high (≥ 8), associated with incremental postoperative morbidity.

Methodology At our institution, all patients undergo a staging laparoscopy to assess disease extension. If eligibility for CRS is established, definitive surgery is planned in 7–14 days. We analyzed the CRS complication rate according to the SCS in 239 patients, between 2017 and 2022. CRS performed was classified as low risk for 35 patients (14.6%), intermediate risk for 110 patients (46%), and high risk for 94 patients (39.3%). Within 30 days after surgery, the severe post-operative complication rate was 10%. Among patients with $SCS < 8$, the risk of complication was 7.6% versus 13.8% with $SCS \geq 8$ (OR=1.96 [0.84– 4.57]). With a multidisciplinary team, we developed a tailored perioperative care algorithm based on presumed SCS at staging laparoscopy, and actual SCS at laparotomy.

Results Preoperative care (bowel preparation, oral supplementation) is proposed according to estimated SCS. When CRS is performed, the early postoperative period management is based on actual SCS. If $SCS < 8$, the nasoenteric tube is removed at the end of the surgery, and no drain is placed. If $SCS \geq 8$, a nasoenteric tube is placed for enteral nutrition, and observation in an intensive care unit is proposed. For this group of patients, a short-term postoperative examination and lab tests are systematically planned 15–20 days after discharge, and then after 1 month.

Conclusion SCS resumes surgical complexity and individuates higher-risk patients. Our algorithm aims to increase adherence to evidence-based recommendations, and mostly, in the era of precision medicine, it aims to implement a patient-focused care plan.

#644 SURGICAL MANAGEMENT OF FIGO STAGE IV EPITHELIAL OVARIAN CANCER VERSUS FIGO STAGE IIIC: THE REAL-WORLD EXPERIENCE FROM KEM

Irina Tsubulak*, Malak Moubarak, Stephanie Schneider, Alexander Traut, Julia Welz, Nicole Concin, Mareike Bommert, Vasileios Vrentas, Kristina Zdanyte, Luisa Bennefeld, Sabrina Kaiser, Timo Westermann, Florian Heitz, Philipp Harter. *Kliniken Essen Mitte, Essen, Germany*

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Introduction/Background We aimed to depict the real-world surgical management of patients, with first diagnosis of FIGO stage IV primary epithelial ovarian cancer (EOC) compared to those with stage IIIC.

Methodology We conducted a retrospective analysis of all patients who underwent surgery for primary stage IIIC-IV EOC at Kliniken Essen-Mitte (KEM) from 2011–2022. Clinical parameters as time of surgery and residual tumour rates were compared between the two groups.

Results 1314 patients (median age 61; range: 21–89) underwent surgery for newly diagnosed FIGO stage IIIC or IV EOC at our centre from 2011–2022 (n=502, 38% and n=812, 62%, respectively). The tumour clearance rates at primary surgery, including procedures with no intent for complete resection, were 65% complete resection, 25% with residuals of 1–10 mm and 11% with >10 mm. The rate of interval debulking surgery (IDS) was 33% (n=163) in the IIIC cohort and 24% (n=192) in stage IV. Of note, more than 50% of IDS patients started neoadjuvant chemotherapy (NACT) prior to their referral to KEM (n=101, 62% and n=98, 51% respectively). In FIGO IIIC, complete macroscopic resection was achieved in 77% of patients who underwent NACT and in 63% of those who underwent primary surgery