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## **Incidence and predictors of postoperative complications in breast oncological surgery**

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**Background** Postoperative mortality and morbidity are important quality markers of surgical care. The operative therapy of breast cancer has generally low mortality and morbidity, however, little is known about the predictors of postoperative complications (PCs). **Aims** To evaluate the type and incidence of PC and relevant risk predictors in women who underwent breast cancer surgery. **Methods** This retrospective study included all women with a histological diagnosis of invasive breast cancer or ductal carcinoma in situ who underwent surgery between 1997 and 2019 at the Department of Gynecology at the Medical University of Graz. PCs were defined as adverse events within 8 weeks after breast cancer surgery. These were categorized by the Clavien-Dindo classification; uni- and multivariable analysis were performed to identify the predictors of risk for PCs. **Results** N=326 patients were included (median age=59, IQR:50-70); most of the women were postmenopausal (72.1%). In 18.4% of patients more than 3 comorbidities were present while 56.1% had only one to three comorbidities. The most common concomitant disease was arterial hypertension (39.3%), followed by endocrinopathies (27.6%). 35.3% of the patients received neoadjuvant chemotherapy. Out of 458 surgical procedures, 232 had any postoperative complications. There were no life-threatening events or deaths. Clavien-Dindo Grade I complications occurred in 58%, Grade II-IIIb in 42% of cases. Basic demographics, TNM classification or hormone receptor status of the tumor were no predictors of PCs. However, pathological N0 status was predictive in both univariate and multivariate analysis ( $p<0.001$ , OR:3.69 (2.11–6.45)); neoadjuvant chemotherapy was predictive in univariate ( $p<0.001$ ) but not in multivariate analysis. **Conclusion** Although the overall incidence of the PCs was high, most of them were minor. Neoadjuvant chemotherapy and N0 status were predictors of postoperative adverse events after breast oncologic surgery.