

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/project-oncology/exploring-the-role-of-prehabilitation-in-cancer-surgery/14630/>

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Exploring the Role of Prehabilitation in Cancer Surgery

Announcer:

You're listening to *Project Oncology* on ReachMD. On this episode, we'll hear from Lisa Parks, an inpatient nurse practitioner of hepatobiliary surgery at the James Cancer Hospital and Solove Research Institute in the Division of Surgical Oncology at the Ohio State University Wexner Medical Center in Columbus, Ohio. Ms. Parks will discuss the role of prehabilitation for patients with cancer undergoing surgery. Let's hear from her now.

Ms Parks:

Prehabilitation consists of coordinated preoperative optimization strategies, and during our preoperative assessment, risk factors are identified in the patient that can be improved prior to surgery, which leads to a better surgical outcome. There are three phases of prehabilitation: the screening and assessment, individualized needs-based interventions, and post-treatment evaluation. Improvements with prehabilitation can be noticeable after two weeks of implementation. Psychologically preparing patients for surgery, building muscle mass, improving the patient's nutritional status and improving exercise capacity are all components of the prehabilitation process. For example, cigarette smoking is associated with surgical site infections, venous thrombosis, and pulmonary and cardiovascular complications. Surgical wound healing is impaired when peripheral vasculature is changed, and carboxyhemoglobin levels are increased. Smoking cessation even for a short time prior to surgery may reduce the chance of these complications occurring. Nurses can assist this process with a referral for patients to a smoking cessation program, and advanced practice nurses may offer oral or dermal nicotine withdrawal tools to aid in smoking cessation.

Malnutrition is common among cancer and frail elderly patients. Low serum albumin and prealbumin levels are used to assess malnutrition. BMI or body surface area is also used as a marker of functional nutrition status with low BMI associated with impaired survival and a variety of cancers. There are many screening tools used to assess malnutrition, like the Malnutrition Universal Screening Tool, abbreviated MUST, MUST; the Nutrition Risk Screening 2002, or NRS 2002; and the Short Nutrition Assessment Questionnaire, abbreviated SNAQ.

Psychological intervention is also a component of prehabilitation. Depression, anxiety and stress are common in patients undergoing oncologic surgery due to the fear of the unknown. Some chronic conditions, like depression, have an altered hypothalamic-pituitary-adrenal axis deregulation, which can contribute to altered immune function and impaired wound healing. It is imperative that the psychological aspect of the patient be addressed with nonpharmacologic and pharmacologic therapy for the best patient outcomes. Between 30 and 90 percent of patients with cancer are anemic at diagnosis. Preoperative anemia is associated with worse short-term outcomes among patients undergoing gastric surgery. These outcomes include an excessive administration of perioperative transfusions, a higher rate of postoperative complications and worse long-term outcomes. Low hemoglobin levels induce poor tumor oxygenation and a hypoxic microenvironment that acts to promote malignant progression, local regional spread, and metastasis. Hypoxic cancer cells are likely to be resistant to chemotherapy and radiotherapy. These patients may require a transfusion prior to surgery.

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