

Reducing Pressure Injuries Within the Perioperative Oncology Setting Using an Evidence-Based Quality Improvement Initiative

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Surgical patients with cancer are at high risk for developing operating room–related hospital-acquired pressure injuries (OR-HAPIs). A nurse-led team at a Magnet-designated comprehensive cancer center was tasked with implementing a quality improvement initiative to reduce the rate of OR-HAPIs. Interventions included the development of a perioperative-specific skin and pressure injury risk assessment, application of prophylactic multilayer foam dressings, electronic health record enhancements, and staff education. The initiative resulted in a 50.5% reduction in OR-HAPIs and an estimated cost avoidance of \$80,210 per year.

AT A GLANCE

- Prolonged surgical time and patient positioning are two main risk factors of OR-HAPIs.
- A preoperative skin assessment and the application of prophylactic multilayer foam dressings are evidence-based strategies that prevent OR-HAPIs.
- Prevention of OR-HAPIs can be achieved through interprofessional collaboration.

KEYWORDS

surgical oncology; pressure injury; perioperative; prophylactic dressing

DIGITAL OBJECT IDENTIFIER

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Operating room–related hospital-acquired pressure injuries (OR-HAPIs) can lead to negative patient outcomes, including debilitating pain, infections, poor quality of life, and death (Association of periOperative Registered Nurses [AORN], 2022; European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, & Pan Pacific Pressure Injury Alliance, 2019). OR-HAPIs can develop within 48–72 hours postoperatively. OR-HAPIs are commonly an adverse result of the patient's anatomic position during surgery, anesthesia-induced immobility, impaired body temperature regulation, reduced perfusion, and a surgery time of three or more hours (AORN, 2022; Engels et al., 2016; Kim & Lee, 2022). The prevention of OR-HAPIs is a safety priority, particularly among high-risk patient populations with complex needs. Patients with cancer needing surgeries are particularly at high risk for OR-HAPIs because of chemotherapy, radiation therapy, nutritional deficits, and low body mass indexes, which make these patients more susceptible to skin and pressure injuries (Aljezawi & Tubaishat, 2018).

Memorial Sloan Kettering Cancer Center is a Magnet®-designated comprehensive specialty cancer center in New York City with 514 inpatient beds. The main campus has 28 state-of-the-art ORs and 100 perianesthesia beds, and provides surgical care for acutely ill adult and pediatric patients within most surgical specialties (except for cardiology and labor and delivery). The oncologic nature of these surgeries makes them extraordinarily complex, with many cases involving resections of large or multiorgan tumors, the instillation of chemotherapy, and intraoperative radiation oncology treatments. This results in an average surgery time of about 4 or more hours, with some surgeries exceeding 24 hours.

In 2020, there were 10 OR-HAPIs that occurred postoperatively. Most of these injuries developed on the patient's chest, ilium, or sacrum, and occurred while patients were in prone or supine positions during surgeries. The perioperative nursing team identified this as an opportunity