



# Surgical Infections in the Gynecological Oncology Patient

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## Introduction

- Surgical site infections account for the largest complication amongst gynecological oncology procedures
- With new surgical techniques, robotic assisted surgery is becoming the choice for surgeons across the country over the traditional laparotomy and open abdomen and pelvic procedures due to the rate of infection decreasing over the years.
- Postoperative infection is a problem that surrounds operating rooms everywhere. Many hospital systems have surgical infection bundles in place that start with the patient at home and continue after their surgical procedure.
- Surgical site preparation, antibiotic prophylaxis, and certain wound closure techniques account for a decrease in surgical site infections.
- Oncology patients are at high risk for surgical site infections due to decreased nutrition, low white blood cell counts, and stress on

## Purpose

- The purpose of this paper is to explore research on surgical site infection rates and comparison of surgical procedures for gynecological oncology patients.



References

## Materials and Methods

- The population for this literature review is individuals who underwent a surgical procedure for gynecological cancer diagnosis via laparotomy and robotic assisted surgery.
- The PICO that guided this review is, "In gynecological oncology surgical patient, how does minimally invasive surgery compared to open surgery affect surgical infection rates within one week postoperatively".
- To answer this PICO research question, CINAHL, PubMed, and EBSCO search databases were used for up to date and relevant literature.
- When conducting research for this topic, key words used in the search engine such as surgical site infection, oncology, gynecology, robot-assisted surgery, and laparotomy.
- The use of these databases and key terms produced numerous research articles (n = 24) that describe that surgical infection rates in robotic assisted gynecological oncology procedures versus laparotomy procedures in gynecological oncology.
- Papers (n = 18) were chosen based on relevance to the PICO questions research in this paper.

## Discussion

- Hysterectomy, the most common gynecological procedure, has a SSI rate of approximately 2 percent
- "The DISINFECT Initiative: Decreasing the Incidence of Surgical Infections in Gynecologic oncology", written by Jolyn S. Taylor MD, MPH and colleagues researched an infection bundle that can be put together by a perioperative unit to reduce surgical site infection during gynecological oncology surgeries.
- "Development of Surgical Site Infections adversely affects health outcomes and is associated with increased morbidity and mortality among cancer patients"
- For robotic-assisted surgery and open abdomen and pelvic cases (laparotomy), the abdomen and the vagina have a sterile prep prior to the beginning of the surgical procedure
- Indications proved that laparoscopic and robot assisted surgery contained the lowest surgical infection rates when compared to laparotomy surgery in the gynecological oncology patient
- Intensive postoperative glucose control reduces the surgical site infection rates in Gynecologic oncology patients
- The use of chloraprep on the abdomen and hibiclens on the vagina are the recommended choice of surgical preparation for these procedures

## Conclusion

- Perioperative nurses need to be aware of the prevalence of surgical site infection rates and what can be done to decrease the rates in different hospital systems.
- Nurse educators in the perioperative department can train staff of prophylactic interventions to reduce the risk of surgical site infection for both laparotomy and robotic-assisted gynecological surgeries.
- Surgical preparation for these patients is the nurses responsibility
- The implementation of an infection prevention bundle is key in the decreased rate of surgical site infection and decreased hospital stay for patients. Anesthesia staff need to be trained on the management of prophylactic antibiotics in the patient, as it should be administered 15 minutes prior to the first incision, along with the management of glucose during the procedure.
- Robotic surgery for these patients pose a smaller risk of surgical site infections as compared to laparotomy.

