

# Implementing a Nurse-Driven Pregnancy Screening Protocol in the Radiation Oncology Setting

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Verification of pregnancy status prior to initiating radiation treatment for cancer is important to preserve patient and fetal safety. However, many institutions lack clear guidelines for pregnancy screening prior to treatment initiation. A practice gap analysis conducted at an academic medical center revealed inconsistent pregnancy screening within the radiation oncology department, with 7% (N = 729) of eligible patients screened prior to initiating treatment. A nurse-driven policy was implemented based on recommendations from the American Society for Radiation Oncology and the National Comprehensive Cancer Network. Postimplementation, 78% (N = 364) of eligible patients received pregnancy screening prior to treatment.

## AT A GLANCE

- Oncology clinicians should screen for pregnancy prior to initiating cancer treatment for patients of childbearing age with an intact uterus.
- Radiation oncology departments need clear policies outlining pretreatment pregnancy screening criteria.
- Radiation oncology nurses can lead process improvement initiatives to preserve the safety of potentially pregnant patients and their fetuses.

## KEYWORDS

radiation; quality improvement; patient safety; pregnancy screening

## DIGITAL OBJECT IDENTIFIER

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Radiation treatment can pose significant risks to fetal development, making integration of pregnancy screening an important feature of patient and fetal safety for patients of childbearing potential with cancer (Fagerstrom, 2024; Gustafson et al., 2018; Jagels et al., 2018). The risks and health consequences of fetal exposure to radiation can include growth restriction, malformations, impaired brain function, and cancer development (American College of Radiology, 2023). Despite these risks, standardized pregnancy screening is not always implemented in clinical practice (Gustafson et al., 2018). About 30% of practicing radiation oncologists reported their practice areas do not have a screening policy in place, and 7% reported that they do not screen for pregnancy at all (Zaki et al., 2021). Variation in practice and a lack of clear clinical guidelines can place patient safety at risk; however, organizations that have departmental policies for pregnancy screening prior to initiating treatment are strongly correlated with higher screening rates (Zaki et al., 2021).

The radiation department at the University of Washington Medical Center in Seattle treats about 900 patients per month. Diagnoses include sarcoma and gastrointestinal, head and neck, and lung cancers. The organization is Magnet-designated and uses shared decision-making through the use of unit practice councils in which staff and department leaders discuss topics related to quality and safety. During one of the council meetings, nurses voiced concern about the inconsistency of patient pregnancy screening prior to initiating treatment. This query led clinic management to further assess the department's practice, which revealed that there was no formal standard or policy for pregnancy screening prior to initiating radiation treatment. A survey of the departmental staff (including attending physicians, residents, nurses, medical assistants, radiation physicists, and radiation therapists) revealed that 58% of staff were inconsistent with ordering pregnancy tests prior to initiating radiation treatment. These results suggested that the department could benefit from an institutional approach to standardize practice. The purpose of this initiative was to find evidence-based guidelines to create a department policy and ensure eligible patients received pregnancy screening prior to receiving radiation treatment.