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According to the 2011 CDC report, breast cancer is the most common of all cancers in women, regardless of age and ethnicity. Reinforcing early detection and appropriate treatment of this potentially deadly cancer are essential to the health of both women and men.

In a community hospital in the eastern United States, in an effort to provide exceptional patient care, an interprofessional team made a bold move to initiate a radioactive seed localization excision (RSLE) program for breast lesions—the second program in the state.

The team included:
- a local general surgery practice
- two radiology centers
- an ambulatory center’s perioperative team
- pathology department
- nuclear medicine
- radiation safety.

**BACKGROUND:**
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**SEED CHAIN OF CUSTODY**

**Step 01:** The radiologist can mammography or ultrasound to place the radioactive seed. The seed identifies the lesion.

**Step 02:** Using a gamma detection device, the surgeon surgically locates the seed and removes the seed, abnormal breast tissue, and its margins.

**Step 03:** Pathology receives the specimen, verifies with a detector that the seed is present, sections specimen for tumor, removes seed and places it in a sealed container.

**Step 04:** Pathology is notified that the specimen is being sent and the transporter signs chain of custody form and transports specimen to pathology.

**Step 05:** The OR nurse uses an x-ray device to take a film of the excised breast tissue, sends the film via internet to radiology to get confirmation that the seed is in the lesion.

**Step 06:** The radioactive seed is taken in a lead container to nuclear medicine for storage until the seed is no longer radioactive.

**PROGRAM DEVELOPMENT:**
- Program started 2 years prior to implementation with surgeon and radiologist training
- Ensured planned program met radiation safety standards
- Interprofessional team meetings
- Development of seed protocol
- Application to the state for approval of seed program
- Once approved, multiple test runs
- Training for interprofessional team
- Three proctored procedures for each radiologist and surgeon
- Ongoing evaluation

Education at the ambulatory surgery center consisted of members of multiple disciplines coming together to provide information about:
- Radiation safety
- Surgical technique
- Seed tracking
- Use of new equipment
- Application of new protocol

**PROGRAM GOALS:**
- Less patient discomfort
- Less patient anxiety and fear of dislodgment (previously required wire to localize mass)
- Improved accuracy of mass excision
- Potential of less breast volume excision
- Decreased patient physical limitations
- Reduction in re-excision
- Increased flexibility for surgical scheduling