

Better Breast Cancer Treatment: From New Kid on the Block to National Leader

Bill Lindsay, BSN, RN, CNOR; Angie Steiner, BSN, RN; Kelsey Larson, MD, FACS, Breast Surgical Oncologist;
Nichole Anderson, MSN, CMSRN; Cindy Ladner, BSN, MBA, CAPA

Background

Intraoperative Radiation Therapy (IORT) treats early breast cancer

- delivered directly to the tumor bed
- during a lumpectomy surgery
- available at very few locations in the Midwest

Benefit of IORT

- shorter length of radiation treatment,
- lower cost of treatment, and
- less damage to healthy tissue

Core Team: The University of Kansas Health System (TUKHS), Indian Creek Campus

- OR circulating RNs,
- surgical technologists,
- sterile processing technicians,
- anesthesia providers,
- breast surgical oncologists,
- radiation oncologists, and
- medical physicists

Increased demand required additional trained staff

Developed an innovation multidisciplinary competency validation methodology

Competency Development

Steps in creation process:

1. Trial simulation performed by multidisciplinary team
2. Identified gaps as topics for competency
3. Developed formal competency to fill gaps

Topics for competency

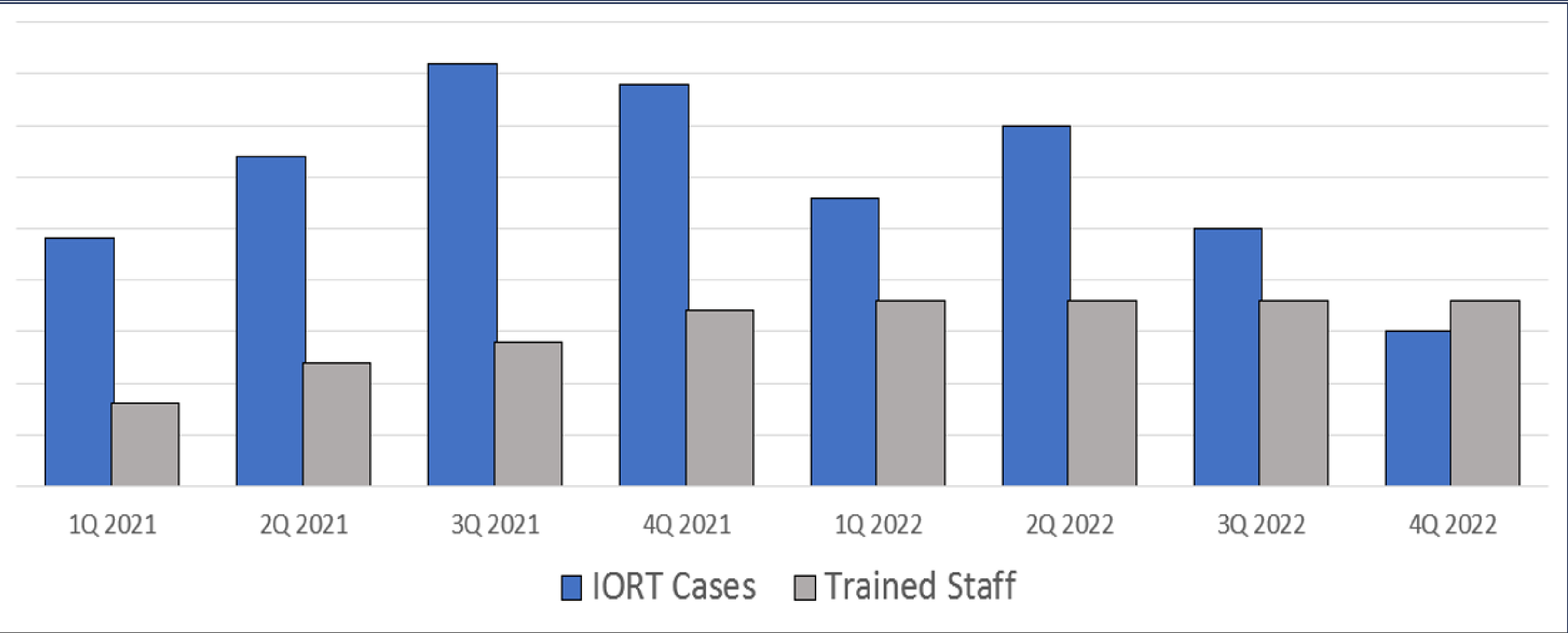
- Enhanced time out
- Radiation safety protocols
 - Device selection
 - Delivery to surgical field
 - Hand-off to sterile processing

Goals of this methodology

- Cognitive: Increase knowledge
- Affective: Increase value of following protocols
- Psychomotor: Increase confidence in performing IORT

Simulation used to identify gaps in performing new IORT procedure. Addressing gaps with matched teaching and competency validation methods led to increased staff confidence and safety.

Figure 1: Comparison of Numbers of Trained Staff as IORT Cases Increased



Competency Validation Documents/ References



We want to acknowledge Lisa E. Guthrie, PhD, RN, NPD-BC for assisting with poster development

Implementation

- Followed Donna Wright's competency model
- Identified gaps specific to IORT and to our staff
- Matched domain with teaching method and competency validation method (See Table 1)
- Reverse Shadowing
 - RN Expert in IORT shadows Newly Trained RN During IORT procedure
 - ST Expert in IORT shadows Newly Trained ST During IORT Procedure

Table 1: Matching Domain, Training, and Competency Validation Methods

Domain	Training Method	Competency Validation Method
Cognitive	<ul style="list-style-type: none">• Didactic- presentations• In-services with experts demonstrating IORT protocols	<ul style="list-style-type: none">• Return demonstration of processes• Written test- need 100%
Affective	<ul style="list-style-type: none">• In-services discussing importance of following IORT protocols	<ul style="list-style-type: none">• Discussion of protocols
Psychomotor	<ul style="list-style-type: none">• Expert support during live procedure	<ul style="list-style-type: none">• Reverse shadowing during live IORT

Outcomes

- Increased numbers of trained staff and IORT procedures (See Figure 1)
- National recognition of safety protocols
- Able to replicate process for other procedures
- Saved costs of lost or damaged equipment
- Following protocols led to
 - Safe delivery of radiation treatment probes to sterile field
 - Increased safe retrieval of probes for reprocessing
 - Improved coordination with sterile processing staff
 - Increased staff confidence



THE UNIVERSITY OF KANSAS HEALTH SYSTEM

