The Emerging Role of the Imaging Specialist: A Workflow Model to Support Medical Dosimetrists

Brandi Carr, Rachel Wilson, Ebonee Daniels-Burbridge, Tosin Kayode, Matthew Thomas, Beth Ghavidel, Hania Al-Hallaq, Justin Roper, Jie Ding, Kirk Luca

Department of Radiation Oncology, Emory University, Atlanta, GA, USA

EMORY WINSHIP CANCER INSTITUTE
National Cancer Institute-Designated Comprehensive Cancer Center

PURPOSE

Objective: To report on the development and operational impact of a dedicated Imaging Specialist team designed to standardize pre-planning imaging workflows, enhance patient safety, and increase dosimetrist capacity for treatment planning.

WORKFLOW OBSTACLES

- Frequent interruptions to planning time
  - New patient imports
  - Record requests
  - OAR segmentation
  - Basic imaging fusions
  - Clinical trial documentation
- Increased risk of downstream planning inefficiencies
- Reduced time for high-quality plan development

PROPOSED SOLUTION

Imaging Specialist Role:

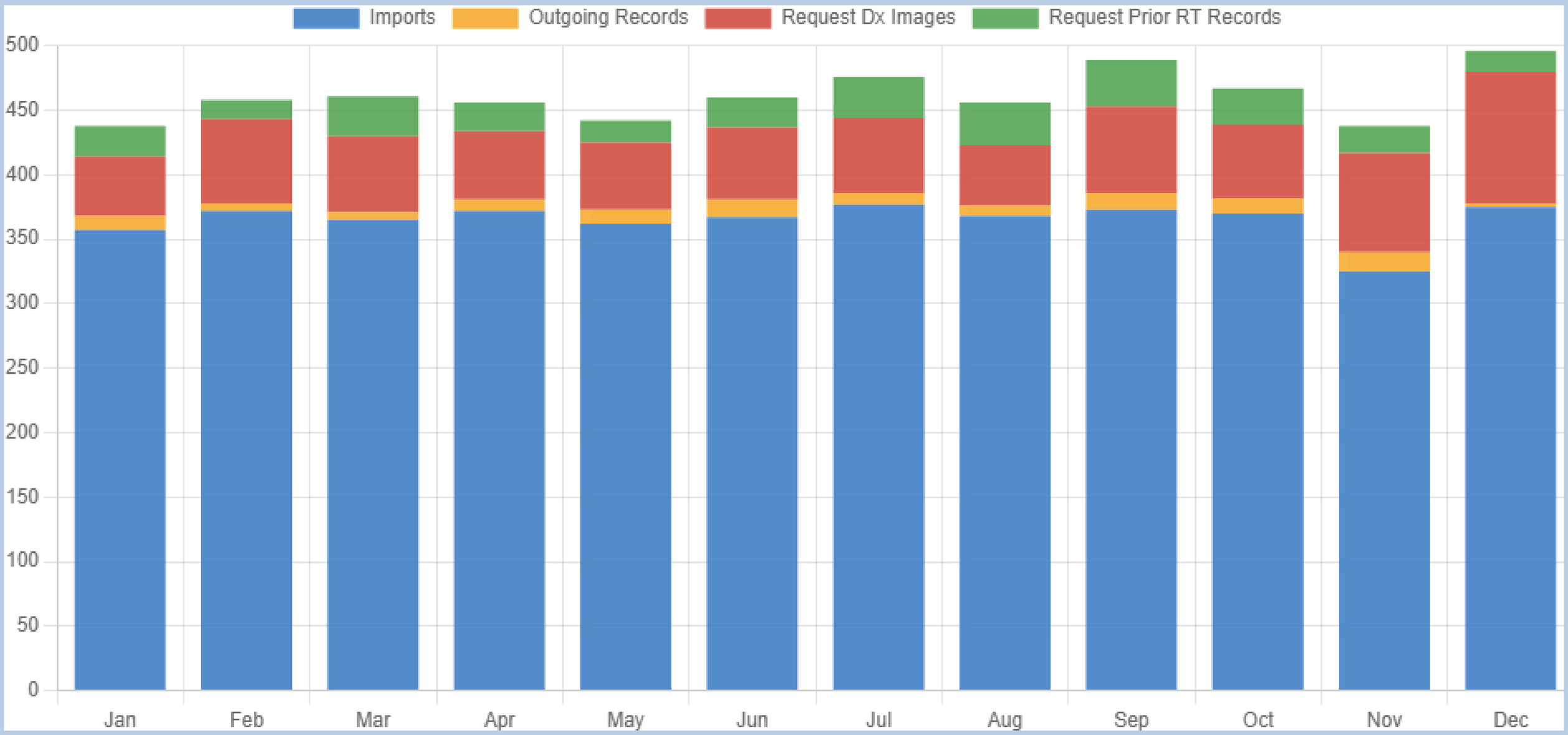
Licensed CT/MRI/RT technologists with advanced cross-sectional anatomy knowledge, foundational understanding of radiotherapy principles & treatment planning systems

Core Responsibilities:

Image retrieval and import, data organization and pre-planning support, workflow standardization, standardized documentation, daily coordination with the care team

SUPPORTING DATA

***Data is for Jan-Dec 2025



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Avg
Imports	357	372	365	372	362	367	377	368	373	370	325	375	**4383**	**365.3**
Outgoing Records	11	6	6	9	11	14	9	8	13	12	15	3	**117**	**9.8**
Request Dx Images	46	65	59	53	52	56	58	47	67	57	77	102	**739**	**61.6**
Request Prior RT Records	24	15	31	22	17	23	32	33	36	28	21	16	**298**	**24.8**
	438	**458**	**461**	**456**	**442**	**460**	**476**	**456**	**489**	**467**	**438**	**496**	**5537**	**461.4**

In 2025, Imaging Specialists completed 5,537 total tasks, including 4,383 image imports, 739 requests for diagnostic images, 298 requests for prior radiation therapy records, and 117 outgoing record requests. Even using a conservative estimate of 20 minutes per task, this represents approximately **1,846 hours annually** that can be redirected from pre-planning support work back to treatment planning and other key clinical activities.

IMPLEMNTATION FRAMEWORK

Key elements for successful adoption:

- All Imaging Specalist work is reviewed by a CMD
- Clearly defined scope of practice and expectations
- Structured onboarding and role-specific training
- Standardized checklists and imaging order sets
- Consistent documentation of clinical practices
- Configured TPS and image-fusion worklists

CONCLUSIONS

Imaging Specialists improve the safety, consistency, and efficiency of pre-planning imaging workflows. By reallocating high-volume support tasks from dosimetrists to trained Imaging Specialists, this model reduces workflow inefficiencies, protects planning time, and allows greater focus on high-quality plan development and clinical innovation. This approach supports safer, more timely, and higher-quality patient care.