

Peter R. Eby, MD, FACR, FSBI<sup>1</sup>, Linda E. Chen, MD<sup>1</sup>, Catherine E. Fidgeon, RHIA, CTR<sup>1</sup>, Gunita Kashyap, MA, MEd, CTR<sup>2</sup>

<sup>1</sup>Virginia Mason Medical Center, Seattle WA; <sup>2</sup>Stanford Health Care, Stanford CA

## BACKGROUND

- U.S. cancer registries don't include the patient-specific initial method of detection (MOD), such as screening mammography, for women with breast cancer.
- Ongoing disagreement about the risks and benefits of breast cancer screening in the U.S. leads to conflicting recommendations and missed opportunities to save lives.

## PURPOSE

- Investigate accurate prospective assignment of patient-specific initial MOD and abstraction into cancer registries.

### \*BI-RADS Assessment Categories in Radiology Reports

	Category	Recommendation	Comments
0	Incomplete	Need additional imaging	
1	Negative	Routine annual screening	
2	Benign	Routine annual screening	
3	Probably benign	Short interval follow up	<2% probability of malignancy
4	Suspicious	Biopsy should be considered	2-95% probability of malignancy
5	Highly suggestive of malignancy	Biopsy should be considered	>95% probability of malignancy
6	Known biopsy-proven malignancy	Surgical and oncological management	

## METHODS

- This single institution research was approved by our IRB.
- MOD codes (figure 1): the single earliest event or test triggering the work-up and diagnosis of breast cancer.

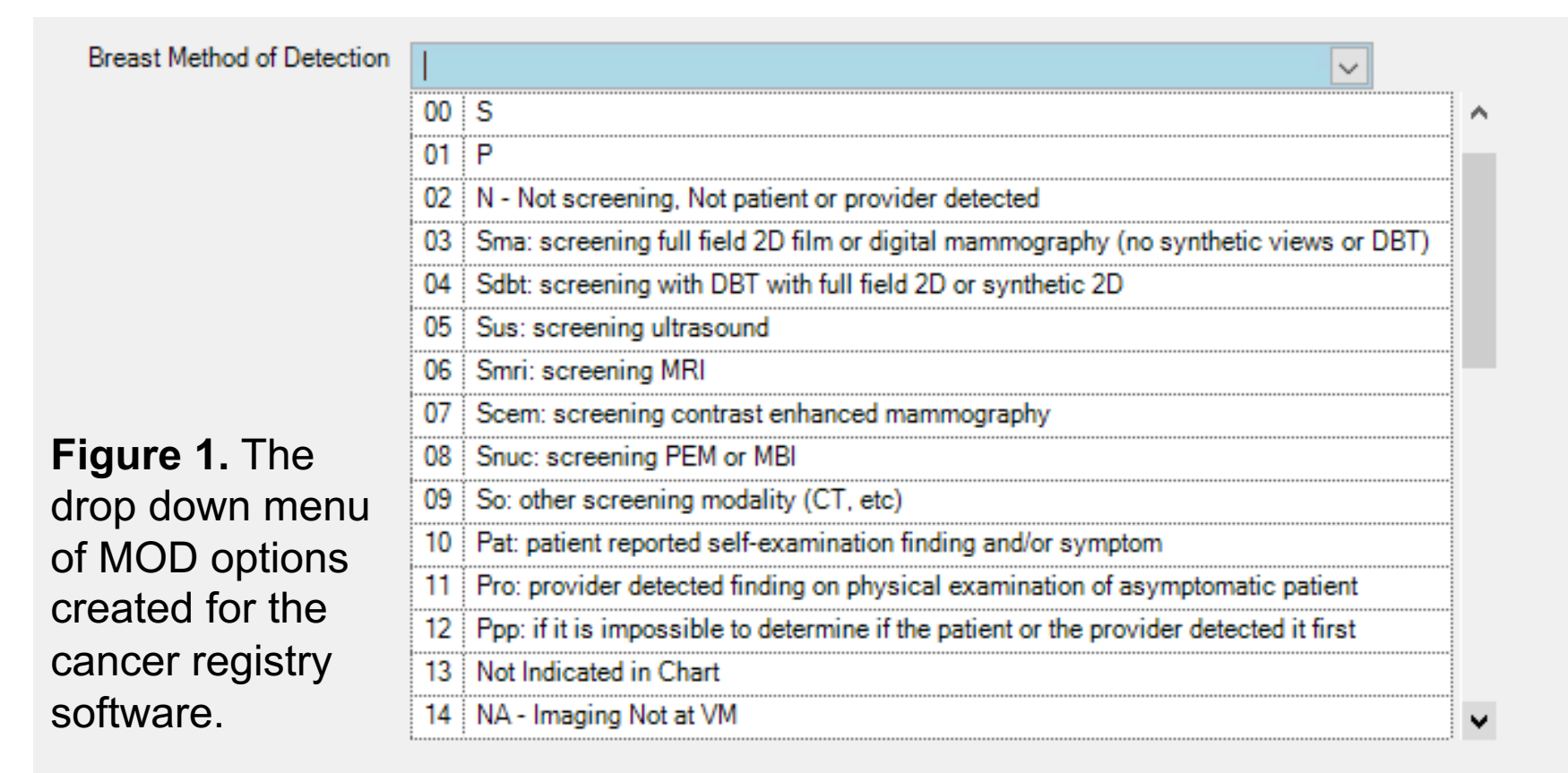


Figure 1. The drop down menu of MOD options created for the cancer registry software.

- Radiologists prospectively assigned a single MOD to **radiology reports** when recommending tissue sampling for any patient without an active diagnosis of breast cancer (figure 2).
- Registrars abstracted and transferred MOD data from radiology reports for new breast cancer cases to the registry.
- 16 months of images and reports for patients with new breast cancer diagnosis and 10 months of registry records were reviewed.

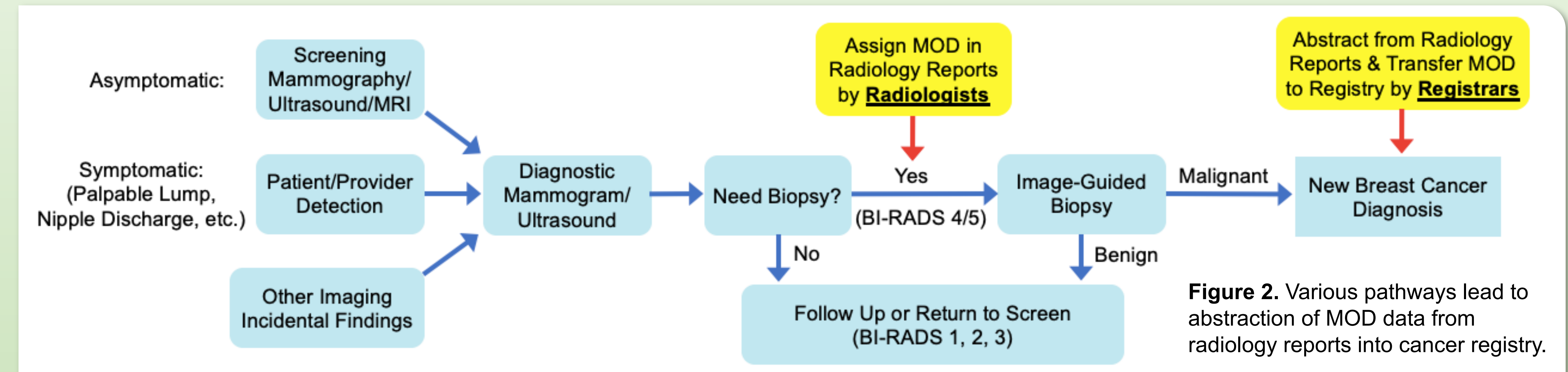
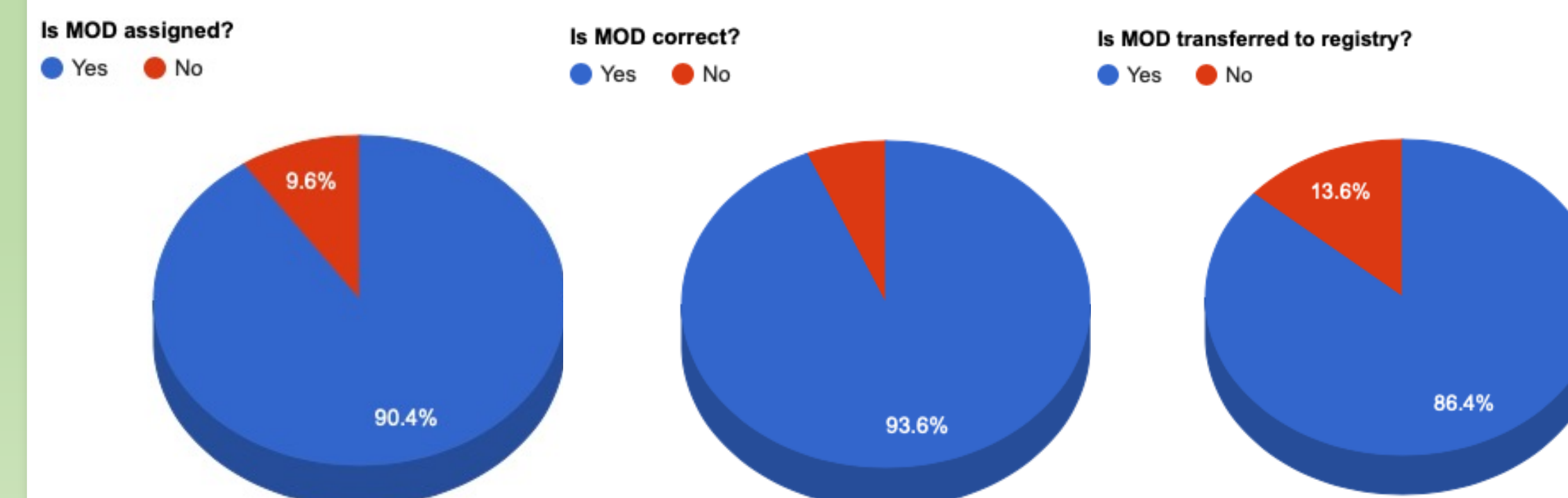


Figure 2. Various pathways lead to abstraction of MOD data from radiology reports into cancer registry.

## RESULTS

- Radiologists assigned MOD in 90% (283/313) of eligible cases and MOD was correct in 94% (265/283) of cases for which it was assigned.
- 72% (13/18) of incorrect MOD assignments was due to radiologist errors.
- Abstractors discovered and transferred MOD to the registry in 86% (152/176) of eligible cases.



## CONCLUSION

- The prospective assignment of a single initial MOD by radiologists is feasible.
- Abstractors can consistently transfer MOD from radiology reports to cancer registries.
- Next step: multiple institutions with electronic prompts and protocol reinforcement to improve accuracy.

## CLINICAL RELEVANCE

- Accurate inclusion of patient-specific initial MOD in national breast cancer registries can help answer national population-based questions about how breast cancer screening impacts patient outcomes.