

How and Why to MOD

From the ACR Breast Commission
Screening & Emerging Technology
Committee

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MOD = initial Method of Detection

MOD

- Is the first test or sign or symptom that triggered the subsequent workup and recommendation for biopsy.

Why MOD?

- USA National cancer registries do not include data about how breast cancer was detected.
- We cannot answer basic questions about how screening impacts outcomes in the USA.
- The debate over when to start and how often to screen rages on in the USA.
- Many other nations track screening mammography at the patient level.

Why MOD?

- Ongoing debate over the risks and benefits of screening
- Incidence of breast cancer keeps creeping up
- Deaths per year keep rising
- Estimates of benefits and risks from models produce misleading information and publications

Knowledge Gaps

- No patient-specific knowledge of initial MOD
- Unable to tie screening directly to outcomes
- Patient populations are evolving
- Technology has changed since the RCTs
- Disparities need to be understood and fixed

Questions we can answer with MOD:

1. What are the relative contributions of screening and treatment to reducing mortality from breast cancer?
2. Should the treatment of stage 1 cancers detected by screening be the same as stage 1 cancers detected clinically?
3. Do patients with screen-detected cancers have different treatment or mortality outcomes compared to patients whose cancers are detected clinically?
4. Do tumors that are screen-detected have different molecular signatures compared to tumors that are detected clinically?
5. Are there racial disparities in screening that impact outcomes?
6. What percentage of breast cancers are not initially detected on screening, and how does this vary by personal risk, breast density, age, or other factors?
7. Are there differences in initial staging for breast cancers initially detected with image-based screening vs clinical or self-examination?
8. Do MOD and outcomes vary with geographic location, and can we use that information to improve access to screening at the local level?
9. Are supplemental screening options (MRI, ultrasound, etc.) improving treatment, morbidity, or mortality from breast cancer?

What is our vision?

- MOD can be found by registry personnel and assigned to patients
- MOD can be abstracted into regional, state and national registries
- Patient specific MOD in registries, linked to tumor type, stage, treatment, demographics and outcomes could help answer important questions about patient care, outcomes, costs and benefits of screening.
- Breast cancer MOD is a template for tracking other cancer screening MOD (lung, colon, etc)

Barriers to Including MOD in the U.S.

- Fragmented healthcare
- Complex registry system
 - Registrar workload and time
 - Registries (SEER) do not require MOD
- No current method to assign MOD
- How to establish truth in diagnosis and MOD

MOD Requirements

- Prospectively assigned before diagnosis to avoid bias
- Highly accurate, assigned by experts
- Easy to assign
- Easy to discover by registry staff
- Easy to transfer into registry databases

How to MOD

- There are 3 basic categories for initial MOD
 - S – image-based Screening detection in asymptomatic patients
 - Includes diagnostic or screening exams for asymptomatic patients in follow-up after completing treatment
 - P – Patient detected by self-exam or symptom, or Provider detected with clinical exam
 - N – None of the above OR Not S and Not P (distant metastasis, CT, labs, non-breast biopsy, etc.)

MOD	DETAILED SUB-CATEGORIES
Screening	<p>Sma: screening full field 2D film or digital mammography (no synthetic views or DBT)</p> <p>Sdbt: screening with DBT with full field 2D or synthetic 2D</p> <p>Sus: screening ultrasound</p> <p>Smri: screening MRI</p> <p>Scem: screening contrast enhanced mammography</p> <p>Snuc: screening PEM or MBI</p> <p>So: image-based screening modality other than mammography, US, MRI, CEM, PEM or MBI (CT, etc)</p>
Patient or Provider	<p>Pat: patient reported self-examination finding and/or symptom</p> <p>Pro: provider detected finding on physical examination of asymptomatic patient</p> <p>Ppp: patient and/or the provider detected the cancer first; impossible to determine whether patient or provider</p>
Not screening, patient, or provider	<p>N: Not image-based screening, Not patient or provider detected</p>

How to MOD

- Radiologist (expert) adds one MOD when
 - The report describes a new suspicious (BI-RADS 4 or 5) finding and tissue sampling is recommended
 - And the patient does NOT already have a diagnosis of breast cancer
- Radiologist reviews prior imaging and clinical information to determine the MOD
- Radiologist adds a line at the bottom of the impression in the radiology report with MOD
- Example: Initial MOD for the patient is _____.

When to MOD

- When assessing a finding as suspicious: BI-RADS 4 or 5
- When recommending a biopsy but the patient declines.
- When upgrading a BI-RADS 3 finding to BI-RADS 4 or 5

When to NOT MOD

- When the patient already has a diagnosis of cancer
- When the MRI is for “extent of disease” because they already have a diagnosis of cancer

Current Status

- Multiple sites actively participating (Arkansas, Duke, Northwestern, Ochsner, Pittsburgh, Virginia Mason)
- Pilot data are being collected
- National Mammography Database has added an MOD field to the registry in preparation
- Letter of support from Am Soc of Breast Surgeons

Please ask questions and provide feedback about this process. We want to know what works and what needs to be clarified and improved.

Thank you for participating!

The ACR Screening & Emerging Technology
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ACR Breast Commission

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