

Breast Mass Study Spring 2021

Introduction

Based on current incidence rates, a woman born today has approximately a one in eight chance of being diagnosed with breast cancer.¹ Early detection is important in both obtaining the appropriate diagnosis and optimizing treatment.¹ Previous experience with patient referral compliance caused us to look further into how we track these outcomes. Following up with breast mass referrals is essential to ensure that all breast masses are thoroughly evaluated and appropriately treated.

Purpose

Known or suspected problem: Patient compliance with referrals may not occur which highlights the importance of our patient tracking process and patient documentation.

Importance to SHS: Documenting the outcomes of breast mass referrals is essential to ensure that all breast masses are thoroughly evaluated and appropriately treated. This includes documentation of compliance with referrals for breast mass imaging, referral tracking, formation of treatment plan and patient adherence to recommended treatment plan.

Performance Goals

1. 85% of patients with a documented breast mass will be referred for imaging or further evaluation by their PCP
2. 85% of Breast Mass referrals will have documented follow up with Case Management

Rationale: Proper documentation of follow up and tracking of all patients with a breast mass to help ensure that they have received appropriate evaluation and treatment is essential.

Data

Evidence of Data Collection

Data Collectors: Women's Health providers performing like duties (MDs, PAs, and NPs) in the clinic

Sources of Data: Electronic Medical Record patient charts

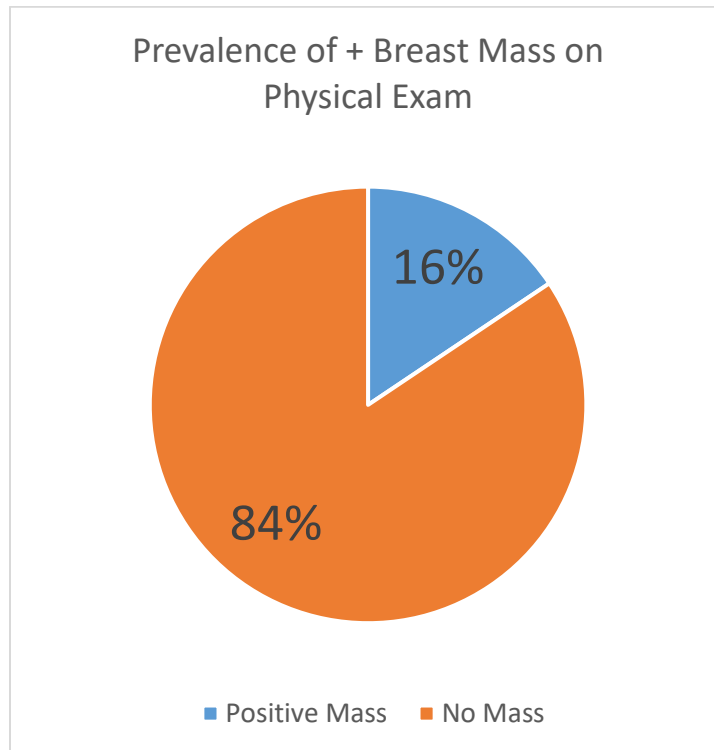
Sample: Patients encounters with a variety of diagnosis codes for breast mass and referrals for breast mass evaluation spanning a two-year period. **Exclusion Criteria:** Prior breast mass biopsy

Length of Data Collection: January 2016 to January 2018

Data Collection Forms: See Appendix A, Screening Tool

Data Analysis SPSS

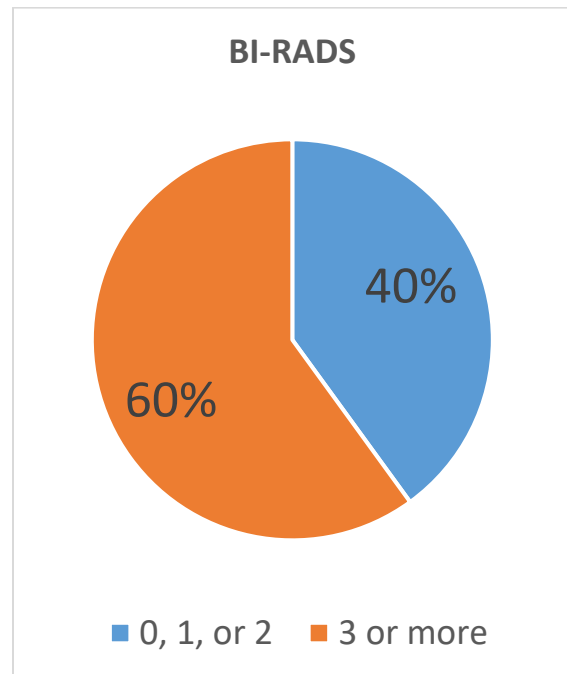
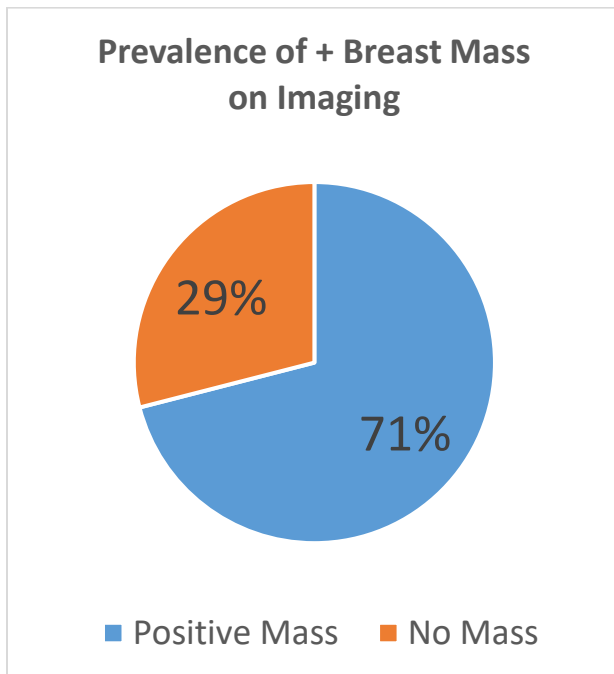
There were 128 charts reviewed. Of the 128, 15.6% (20) had a breast mass and 84.4% (108) did not. Twelve (60%) of the 20 cases were referred for imaging and eight were not. Seventeen (85%) of the total twenty cases had follow-up documented; three did not. Ten (50%) of the twenty patients were using combination hormonal methods, two (10%) were using progestin-only methods. Four (20%) of the twenty patients were advised to stop their hormonal birth control.



Of the eight patients not referred for imaging, six were anticipated to follow up with their primary care physician (PCP) for an imaging referral. The other two not referred for imaging had spontaneous resolution of their symptoms.

Of the 12 patients referred for imaging, eight patients completed the imaging and seven imaging results were received. Two patients did not complete the imaging and two were lost to follow up. Of the seven results; five showed a breast mass and two did not. The five who had positive imaging results required further intervention.

Of the eight imaging results, two had BI-RADS less than or equal to 2 and five had BI-RADS of 3 or greater. See Appendix B, BI-RADS mammographic assessment categories.



Comparing Current Performance vs Goals

Goal 1: 85% of patients with a documented breast mass will be referred for imaging or further evaluation by their PCP.

Did not meet Goal 1: Only 60% of patients with a breast mass were referred for imaging. However, outside insurance (i.e. MediCAL, commercial HMO) may be a factor that we did not account for in this goal, and some patients may need to see their PCP for an imaging referral.

Goal 2:

85% of Breast Mass referrals will have documented follow up with Case Management.

Did not meet Goal 2: Of the 12 cases in which referrals for imaging were made, 67% (8) had follow up documented and 33% (4) were lost to follow up or were non-compliant with treatment plan.

Implementing Corrective Actions

What we knew: This was an initial study to evaluate our breast mass referral process and determine if our current breast mass detection and follow up process constitutes a quality of care concern.

What we learned:

1. In our study sample, 40% of patients with breast masses did not have a formal referral for breast imaging or a referral to a Breast Specialist. These patients likely represent patients who may have an HMO/Medi-Cal insurance plans and were referred back to their PCP. It is unclear how extensively their care was followed after that.
2. The majority (67%) of referrals for further evaluation for breast mass were followed to completion, but 33% were lost to follow up or non-compliance.

Anticipated Corrective Actions:

1. Revised tracking system that differentiates patients directly referred for imaging from patients with HMO/Medi-Cal insurances, who were recommended to follow up with their PCP. This system will help ensure that that all patients receive some type of documented follow up by our case management team and/or other outside providers.
2. Data from diagnostic codes which are irrelevant to this study will be excluded and appropriate diagnostic codes will be determined by with clinical team.

Re-Measuring

Designated Re-Measurement Time:

The study was repeated in 2020; the designated chart collection period was April 2019 – October 2020.

Data Analysis

Breast Mass

There were 53 charts reviewed during the study period; of the 53, 27 (50.9%) had a breast mass palpated during the exam. Seventeen of the 27 patients (63.0%) specifically came in for a breast problem and 10 (37.0%) came in for a different reason and the breast mass was either discovered or brought up as a secondary issue during the visit. Seven of the 27 patients (25.9%) were using hormonal contraception; five of the seven patients (71.4%) were using combination birth control pills, one had Nexplanon, and one had a hormonal IUD. Two of the seven patients (28.6%) were recommended to discontinue using the hormonal contraceptives.

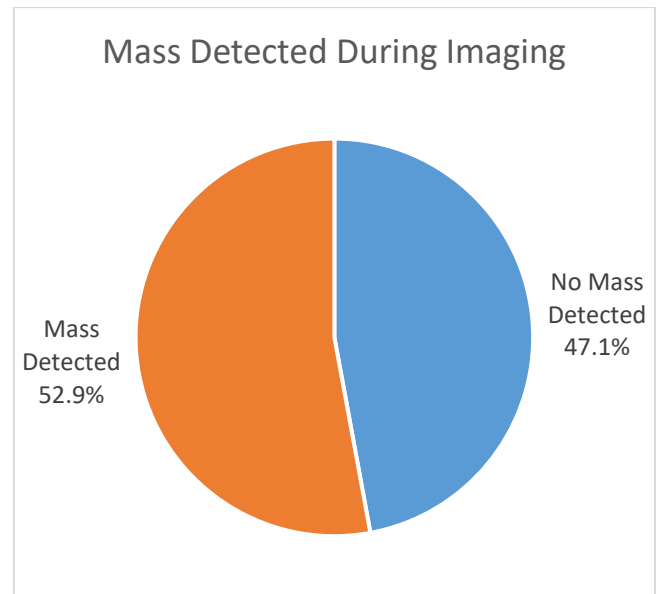
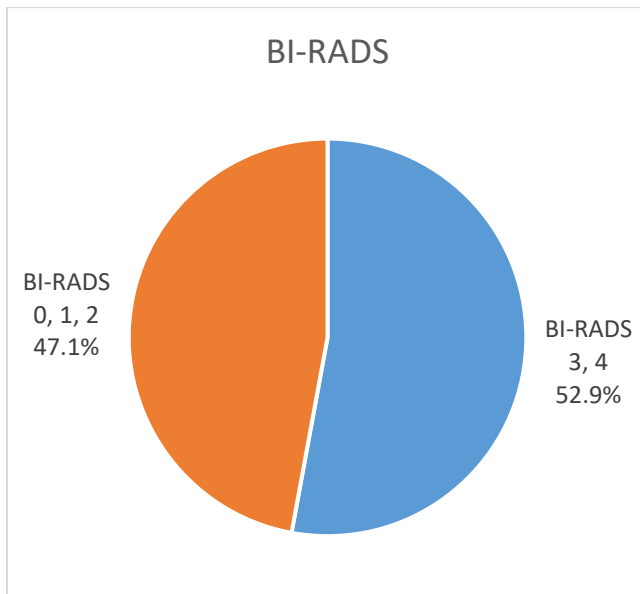
Imaging

Twenty-five of the 27 patients (92.6%) were referred to imaging and two patients (7.4%) were referred to their Primary Care Physicians to have imaging ordered, for a total of 100% of patients being referred directly to imaging or their PCP. Of the 25

who were referred directly to imaging, 17 (68.0%) completed imaging and eight (32.0%) did not. Documentation was received for all 17 patients who completed imaging and the imaging was completed within six months for all patients (88.2% completed within three months).

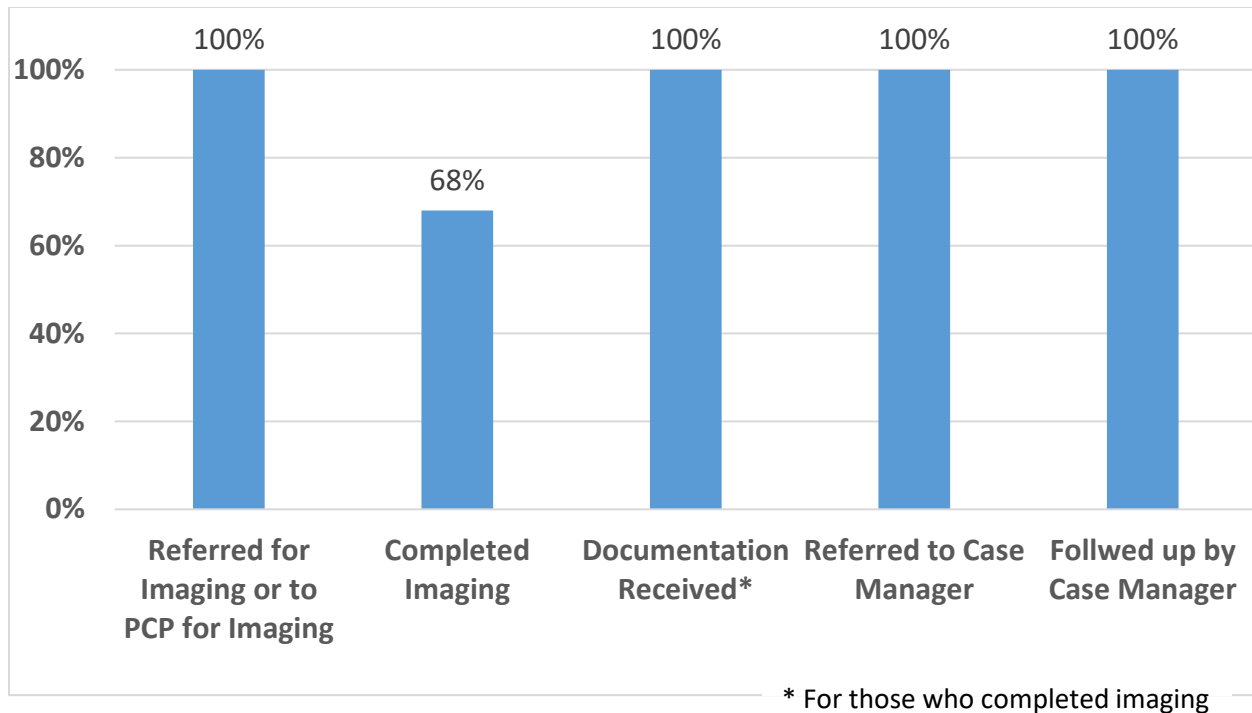
Imaging Results

Eight patients of the 17 who completed imaging (47.1%) had results of BI-RADS category 0,1,2 and nine patients (52.9%) had results of BI-RADS category 3 or 4. Nine patients (52.9%) had results that indicated a mass and eight (47.1%) did not show a mass on imaging.



Case Management

All 27 patients (100%) who had a mass detected during the physical exam were referred to the Referral Nurse for follow-up and the referral nurse followed up with all 27 patients (100%). In some cases, multiple attempts were made to contact the patient but the patient did not respond to communication attempts and a certified letter was sent.



Results VS Performance:

Goal 1: 85% of patients with a documented breast mass will be referred for imaging or further evaluation by their PCP.

Goal 1 was met: 100% of patients with a documented breast mass were referred directly to imaging or to their PCP.

Goal 2: 85% of Breast Mass referrals will have documented follow up with Case Management.

Goal 2 was met: 100% of patients were referred to the Referral Nurse who followed up with 100% of the patients referred.

Implementing Additional Corrective Actions

What we knew: Since the pilot study in 2018, two systemic changes were implemented:

1. A designated referral nurse was assigned to assist with patient follow up.
2. All patients referred for imaging have an EMR referral generated to notify the referral nurse to follow up with the patient.

What we learned:

1. By implementing these systemic changes, we were able to provide follow up to 100% of patients referred to the referral nurse.

2. Implementing an internal EMR referral for patients with a suspected breast mass streamlined the follow up process leading to a 100% follow up rate.

Anticipated Corrective Actions:

1. Some patients did not respond to communication attempts made by the referral nurse (including multiple means such as text messages, secure messages, and phone calls) ultimately resulting in a certified letter being sent to the patient. These same patients had subsequent clinic visits for other concerns but the referral was not brought up. One suggestion is to flag the patient chart to alert the provider to inquire about the referral and update the patient chart (i.e. patient no longer wishes to be followed up regarding breast mass, etc).

Reporting:

CQMI: December 13, 2018

Clinical Team: February 13, 2019

Executive Team: March 26, 2019

Remeasurement Reporting:

CQMI: May 27, 2021

Clinical Team: October 27, 2021

Executive Team: June 2021

References:

¹National Institutes of Health. (2010). *Breast Cancer Fact Sheet*. Retrieved on 12/10/18 from [https://report.nih.gov/nihfactsheets/Pdfs/BreastCancer\(NCI\).pdf](https://report.nih.gov/nihfactsheets/Pdfs/BreastCancer(NCI).pdf)

Appendix A: Study Tool

Electronic Tool through Qualtrics:

https://csulb.qualtrics.com/jfe/form/SV_eQjdHyGfyP9Kzjw

Appendix B

BI-RADS Mammographic Assessment Categories

Assessment	Management	Likelihood of cancer
Category 0: Incomplete – Need additional imaging evaluation and/or prior mammograms for comparison	Recall for additional imaging and/or comparison with prior examination(s)	N/A
Category 1: Negative	Routine mammography screening	Essentially 0 percent likelihood of malignancy
Category 2: Benign	Routine mammography screening	Essentially 0 percent likelihood of malignancy
Category 3: Probably benign	Short-interval (6-month) follow-up or continued surveillance mammography	>0 but ≤2 percent likelihood of malignancy
Category 4: Suspicious	Tissue diagnosis	>2 but <95 percent likelihood of malignancy
Category 4A: <i>Low suspicion</i> for malignancy		>2 to ≤10 percent likelihood of malignancy
Category 4B: <i>Moderate suspicion</i> for malignancy		>10 to ≤50 percent likelihood of malignancy
Category 4C: <i>High suspicion</i> for malignancy		>50 to <95 percent likelihood of malignancy
Category 5: Highly suggestive of malignancy	Tissue diagnosis	≥95 percent likelihood of malignancy
Category 6: Known biopsy-proven malignancy	Surgical excision when clinically appropriate	N/A

Appendix C: Summary of Data Analysis

There were 53 charts reviewed; of the 53, 27 (50.9%) had a breast mass palpated during the exam.

Of the 27 that had a breast mass palpated during the exam:

Reason for Visit

- 17 (63.0%) specifically came in for a breast problem
- 10 (37.0%) came in for a different reason and the breast mass was discovered or brought up as a secondary issue during the main visit reason

Hormonal Contraception

- 7 (25.9%) were on hormonal contraceptives
 - 5 were on combination birth control pills
 - 1 had Nexplanon
 - 1 had a hormonal IUD
- 2 of the 7 (28.6%) were recommended to discontinue the hormonal contraceptives

Imaging

- 25 (92.6%) patients were referred for imaging:
 - 17 (68.0%) completed imaging
 - 8 (32.0%) did not complete imaging
- 2 (7.4%) were referred to their PCP for imaging.

Of the 17 who completed imaging:

- **Timing of imaging:**
 - 15 (88.2%) completed within 3 months
 - 2 (11.8%) completed in 3-6 months
- **Documentation of Imaging**
 - 17 (100.0%) Received
- **Results of Imaging**
 - 9 (52.9%) indicated a mass
 - 8 (47.1%) did not indicate a mass
- **BI-RADS**
 - 8 (47.1%) patients had BI-RADS category 0,1,2
 - 9 (52.9%) patients had BI-RADS category 3 or 4

Case Management

- 27 (100.0%) patients were referred to the Case Manager to assist with referral for imaging
- Case Management followed up with 100% of the patients referred

In some cases, multiple attempts were made to contact the patient but the patient did not respond and finally a certified letter was sent.

Comparing Current Performance vs Goals

Goal 1: 85% of patients with a documented breast mass will be referred for imaging or further evaluation by their PCP.

100% of patients with documented breast mass were referred to imaging or to their PCP - GOAL MET

Goal 2: 85% of Breast Mass referrals will have documented follow up with Case Management.

100% of referred patients were followed up by Case Management - GOAL MET

