Story from the front lines:
A 68 year old man with a history of coronary artery disease with drug eluting stent placed 6 months prior presented to his primary care doctor complaining of a palpable breast mass that had been present for approximately 3 months. The patient denied that it was painful, growing larger, associated with other changes in his breast tissue, or any constitutional symptoms. His exam revealed gynecomastia bilaterally and a 2 cm oval shaped mass that was mobile but slightly tender to palpation in the upper outer quadrant of the right breast. The patient was quite concerned that this mass was a potential cancer and he was referred to a general surgeon for further evaluation. The patient was seen 2 weeks later in general surgery clinic at which time a mammogram and ultrasound were ordered. He was scheduled for a lumpectomy 1 week later. In preparation for this, the patient was told to stop his aspirin and clopidogrel, which he was taking for his recent coronary stent.

Five days after his surgery consultation, but prior to his scheduled procedure, he presented to the emergency department complaining of acute chest pain. He had no EKG changes and a negative troponin, but given his history of coronary artery disease and recent cessation of his antiplatelet medications, was admitted for concern for acute coronary syndrome. The patient was admitted to the hospital, underwent serial blood draws to monitor troponin levels, as well as multiple EKG’s, a chest radiograph, and a CT angiogram with pulmonary embolism protocol. Given that all of these tests were reassuring and the patient had clearly reproducible chest pain with palpation of the sternum, it was ultimately decided that the patient likely had costochondritis and was discharged to home in less than 24 hours. Breast imaging studies ordered prior to hospitalization were consistent with lipoma and planned lumpectomy was cancelled.

Teachable Moment:
Male breast cancer is rare with fewer than 2000 cases per year in the United States, representing less than 1% of all breast cancer diagnoses.1 Risk factors for male breast cancer include genetic factors, such as the presence of BRCA mutations, Klinefelter’s syndrome, as well as exogenous factors including estrogen or testosterone exposure, radiation, history of prostate cancer, use of finasteride, and obesity.

The diagnostic workup for a breast mass in men is less well studied, and therefore more disputed, than for women, but there have been several studies addressing the utility of mammography and ultrasound in men as the first step prior to invasive procedures. A study of 104 patients by Evans et al demonstrated a 92% sensitivity and 99% negative predictive value of a mammogram for the diagnosis of breast cancer.2 Adibelli et al evaluated the use of both ultrasound and mammography and found that ultrasound had 100% sensitivity and 97% specificity for the detection of malignancy for 55 patients and concluded that ultrasound was superior to mammography.3 In the event that both mammography and ultrasound are not diagnostic, fine-needle aspiration can be useful to make a diagnosis.1

In this case, the patient’s mammogram revealed gynecomastia without features such as visible mass or microcalcifications and the ultrasound showed a 2cm mass consistent with lipoma.

On initial presentation, the benign quality on exam and lack of risk factors in this particular patient make a strong argument for careful observation and reassurance by the clinician, rather than further diagnostic testing or subspecialty referral. If further workup due to either patient or clinician preference was desired, a single, noninvasive diagnostic test could be a reasonable next step to provide additional reassurance.
However, given the rarity of male breast cancer and availability of high quality noninvasive testing, referral for intended removal of the lump posed risks to the patient that exceeded any potential benefit. Though well-intended, prompt referral without first pursuing a careful diagnostic evaluation and assessment of risk based on probability lead to avoidable hospitalization, CT scan of the chest, and all the attendant risks of a hospital stay. Fortunately his chest pain was non-cardiac in nature and thus avoided in-stent thrombosis while off anti-platelet therapy.

2 Evans, G; Anthony, T et. al. The diagnostic accuracy of mammography in the evaluation of male breast disease. The American Journal of Surgery 2001 (81); 96-100