The use of tumor marker testing or advanced imaging for early stage breast cancer patients who have been treated with curative intent

**UTILIZATION: 46%**

**BACKGROUND**

Regular physician exams and mammograms are recommended for women who have successfully completed treatment for early stage breast cancer. Blood tumor marker tests and/or advanced imaging beyond mammography are not recommended in the absence of concerning symptoms or physical examination findings. There is no evidence that these tests improve patient quality of life or alter survival. Unnecessary imaging and/or tumor testing can cause patient harm by leading to invasive procedures, overtreatment, misdiagnosis, exposure to radiation, anxiety and uncertainty when the result is falsely positive, a false sense of security when the result is negative, and increased cost. The 2012 ABIM/ASCO Choosing Wisely Recommendation #1 identifies improving adherence to breast cancer recurrence monitoring guidelines as an opportunity to improve care and reduce cost.

**POPULATION**

N = 1521

Inclusion criteria:

- Female breast cancer diagnosis
- Diagnosis January 1, 2007 to May 31, 2014
- First primary tumor
- AJCC Stage I or Stage II
- Received curative therapy starting within 6 months of diagnosis
- Has an identifiable end of curative therapy marking the start of the surveillance period
- Enrolled during surveillance period

**DEFINITIONS**

- Advanced imaging: PET, CT, and radionuclide bone scans
- Biomarker testing: CEA, CA15-3, and CA27.29
- Curative therapy: Mastectomy, or lumpectomy plus radiation within 90 days.
- End of curative therapy: First 4 month gap in treatment (mastectomy, lumpectomy, radiation therapy, or chemotherapy)
- Surveillance period: Begins with a 4 month treatment gap and ends 13 months later or at the start of new treatment (whichever is earlier).

**RESULTS**

Clinic variation in the use of testing (with advanced imaging or tumor markers) for breast cancer during the surveillance period ranges from no use at all to use in over 75% of patients.

**UTILIZATION OF TUMOR MARKERS BY STAGE**
38% of breast cancer patients received tumor marker testing during surveillance

**UTILIZATION OF ADVANCED IMAGING BY STAGE**
17% of breast cancer patients received advanced imaging testing during surveillance