The use of advanced imaging for early stage breast cancer patients

**Utilization: 20%**

**Background**
PET, CT or bone scans are not recommended for women with low-risk breast cancers. Early breast cancers are considered low-risk when patients have no symptoms, no concerning findings on clinical examination by an oncology-trained physician, and no pathologic staging results that suggest a more advanced stage. There is no evidence that using these advanced imaging tests helps with treatment or survival.

Using imaging when it is not recommended can cause patient harm when they lead to unnecessary invasive procedures, overtreatment, misdiagnosis, exposure to radiation, increased cost and create anxiety and uncertainty associated with a false-positive result. The 2012 ABIM/ASCO Choosing Wisely recommendation #3 identifies adherence to evidence-based breast cancer staging guidelines as an opportunity to improve care and reduce costs for breast cancer patients.

**Population**
- N = 4225
- Inclusion criteria:
  - Female breast cancer diagnosis
  - Diagnosed January 1, 2007 to May 31, 2014
  - First primary tumor
  - Enrolled +/- 2 months of diagnosis
  - Stage: In situ, Stage I, or Stage II

**Definitions**
- Advanced imaging: PET, CT, and radionuclide bone scans
- Time period: 2 months prior to diagnosis through 2 months following diagnosis

**Results**

**Utilization by Clinic**
Clinic variation in the use of breast imaging during the diagnostic period ranges from no use at all to use in over 70% of patients.

**Utilization by Imaging Type**
While all advanced imaging types were used during the staging of breast cancer, CT scans was the most commonly used technology.

**Utilization by Stage**
Use of advanced imaging increased for higher staged cancers.

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