Screening Mammography

- Module 4: Agreement over screening
  - Screening Mammography reduces breast cancer mortality
- Module 5: Controversies in screening
  - When to start?
  - When to end?
  - How often?
- Module 6: Negative consequences of screening
Module 5
Controversies in screening

• Intended Learning Outcomes
  – Incorporate mammography screening guidelines into your clinical practice
  – Develop confidence discussing controversial issues regarding screening with patients
Michigan Cancer Consortium
Screening Guidelines for Early Detection of Breast Cancer
May 2014

The Michigan Cancer Consortium supports the breast cancer screening guidelines for women at average and increased risk as recommended by the American Cancer Society (2014)¹ and the National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology for Breast Cancer Screening and Diagnosis (V2.2013)².

I. Recommendations for Breast Cancer Screening — Average Risk for Breast Cancer

<table>
<thead>
<tr>
<th>Screening Exam</th>
<th>Interval</th>
<th>Age to Begin</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Awareness/Breast Self Exam¹</td>
<td>Optional</td>
<td>Mid-20’s</td>
<td>See NOTE*</td>
</tr>
<tr>
<td>Clinical Breast Exam (CBE)¹,²</td>
<td>Every three (3) years</td>
<td>Age 25-39</td>
<td>CBE should be part of a periodic health exam</td>
</tr>
<tr>
<td></td>
<td>Annually</td>
<td>Age 40</td>
<td></td>
</tr>
<tr>
<td>Mammography¹,²,³,⁵</td>
<td>Annually</td>
<td>Age 40</td>
<td>Yearly exams should continue for as long as a woman is in good health</td>
</tr>
</tbody>
</table>

* NOTE: Breast Awareness/Breast Self Exam

- Breast self exam (BSE) is an option for women starting in their 20s. Women should be informed about the benefits and limitations of BSE.¹
- Women should be familiar with their breasts and promptly report changes to their healthcare provider. Periodic, consistent BSE may facilitate breast self awareness. Pre-menopausal women may find BSE most informative when performed at the end of menses.²
# Mammography Recommendations

## May 2015

### Average Risk

<table>
<thead>
<tr>
<th>SOCIETY</th>
<th>AGE TO START</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACS</td>
<td>40</td>
<td>Annual</td>
</tr>
<tr>
<td>ACOG</td>
<td>40</td>
<td>Annual</td>
</tr>
<tr>
<td>AMA</td>
<td>40</td>
<td>Annual</td>
</tr>
<tr>
<td>ACR/SBI</td>
<td>40</td>
<td>Annual</td>
</tr>
<tr>
<td>NCCN</td>
<td>40</td>
<td>Annual</td>
</tr>
<tr>
<td>NCI</td>
<td>40</td>
<td>1-2 yrs</td>
</tr>
<tr>
<td>USPSTF (2009)</td>
<td>50 discuss 40s</td>
<td>biennial</td>
</tr>
<tr>
<td>AAFP</td>
<td>50 discuss 40s</td>
<td>1-2 years</td>
</tr>
</tbody>
</table>
USPSTF 2009

- Recommended biennial screening age 50–74
- Recommended against screening in 40s
- Insufficient evidence for MRI or Digital Mammography

- USPSTF guidelines apply only to women who do not have previous cancer dx or high risk conditions
Age 40’s screening

• RCTs – 39–49
  – 15% reduction in mortality

Mortality Reduction: Age 40-49 vs 50-59

SCREENING AGE 40-49

– CISNET: 51 LYG/1000 for annual screening
– Where is the tipping point in favor of screening in 40s?
– If woman has personal 2x risk,
  Risk is similar to 50–74 : Start screening at 40

How often?

- RCT – q 12–28 months
- UK – q 1–3 years
- Modern Observational Studies – q 1 or 2 years

- No RCT or observational studies for 1 vs 2 year intervals
How often?

Modeling study
– Save most lives: annual 40–69
  • 30–35% more lives than biennial in decades 40s, 50s and 60s
– Most efficient: biennial 50–79
  • Efficiency = outcome per mammogram

### Biennial vs. Annual

**2009 CISNET Models (USPSTF)**

**Lives Saved per 1,000 Women Screened (FS)**

<table>
<thead>
<tr>
<th>Decade</th>
<th>Biennial</th>
<th>Annual</th>
<th>% Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>40’s</td>
<td>0.97</td>
<td>1.34</td>
<td>38%</td>
</tr>
<tr>
<td>50’s</td>
<td>2.20</td>
<td>2.85</td>
<td>30%</td>
</tr>
<tr>
<td>60’s</td>
<td>3.30</td>
<td>4.30</td>
<td>30%</td>
</tr>
<tr>
<td>70’s</td>
<td>2.35</td>
<td>2.65</td>
<td>13%</td>
</tr>
</tbody>
</table>

More frequent screening means higher mortality reduction

<table>
<thead>
<tr>
<th>Screening Method</th>
<th>Mortality Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-70 triennial</td>
<td>16%</td>
</tr>
<tr>
<td>40-73 triennial</td>
<td>20%</td>
</tr>
<tr>
<td>40-73 annual</td>
<td>37%</td>
</tr>
</tbody>
</table>

When to stop screening

• No consensus/ No RCT trials
• Most studies end in the 70’s
• In general: continue while the woman is in good health
• Assess comorbidities
• >5–10 year life expectancy

NCCN Breast Cancer Screening and Diagnosis Version 1.2014
Life expectancy

- 74 year old female
  - 20% will live 19 years
  - 50% will live 13 years

Society of Actuaries