Strategies for Management of Early Stage Breast Cancer in Older Women

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Local Treatment of Early Stage Breast Cancer in the Elderly

Sarah L. Blair, MD
Background

• US Census 16.7 million Americans >80, 65% women\(^1\).
• Cancer is 2\(^{nd}\) most common cause of death in women >75 \(^2\).
• Risk of breast cancer triples women aged 70-80 to 43/1000 \(^2\).
• Older women underrepresented in clinical trials


Mammography screening guidelines

<table>
<thead>
<tr>
<th>Society</th>
<th>Year</th>
<th>Starting Age</th>
<th>Recommendation</th>
<th>Ending age</th>
<th>Additional</th>
</tr>
</thead>
<tbody>
<tr>
<td>American College of Radiology (ACR), Society of Breast Imaging (SBI)</td>
<td>2007</td>
<td>40</td>
<td>Annual mammography and clinical breast exam</td>
<td>When life expectancy is &lt;5 years</td>
<td>Insufficient evidence to recommend BSE</td>
</tr>
<tr>
<td>American College of Obstetrics and Gynecology</td>
<td>2003</td>
<td>40-49</td>
<td>Mammography every 1-2 years for patients age 40-49. Annual for age 50 and above. Annual CBE</td>
<td></td>
<td>BSE can be recommended</td>
</tr>
<tr>
<td>American College of Surgeons (ACS)</td>
<td>2009</td>
<td>40</td>
<td>Annual screening mammography</td>
<td>None specified</td>
<td>No recommendation</td>
</tr>
<tr>
<td>National Comprehensive Cancer Network (NCCN)</td>
<td>2009</td>
<td>40</td>
<td>Annual screening mammography</td>
<td>None</td>
<td>Recommend for Clinical Breast Exam</td>
</tr>
<tr>
<td>US Preventive Services Task Force</td>
<td>2009</td>
<td>50</td>
<td>Biennial mammography</td>
<td>74</td>
<td>Recommend against BSE and insufficient evidence for CBE</td>
</tr>
<tr>
<td>American Cancer Society (ACS)</td>
<td>2015</td>
<td>45-54</td>
<td>Annually Every other year</td>
<td>Life expectancy &gt;10yrs</td>
<td>Recommend against BSE and insufficient evidence for CBE</td>
</tr>
</tbody>
</table>
Breast cancer detection

- Most studies show breast cancers most likely to present with clinically palpable disease \(^1\,^2\).
- Litvak et al retrospective review 354 pts >70 found in pts > 80 only 38% mammographically detected \(^1\).
- Vetter et al found in older patients, tumors were more often detected by a clinical breast examination (38.9% vs. 17.0%, \(p < 0.001\)) and less often by radiologic procedures (10.4% vs. 29.9%, \(p < 0.001\))\(^2\).


Figure 2. Trends in primary nonsurgical treatment over time among total cohort of octogenarians, 2004 to 2012. \(n = 95,357\).

- NCDB 2004-2012
- Non-operative tx increased from 7% to 12% in pts ER pos tumors

Invasive Breast Cancer

LOCOREGIONAL TREATMENT OF CLINICAL STAGE I, IIA, OR IIB DISEASE OR T3, N1, M0

- Radiation therapy to whole breast with or without boost to tumor bed (category 1). Intraclavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk (category 1). It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

- See BINV-4

- Radiation therapy to whole breast with or without boost to tumor bed (category 1). Strongly consider radiation therapy to infraclavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

- Radiation therapy to whole breast with or without boost to tumor bed or consideration of partial breast irradiation (PBI) in selected patients. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

1See Principles of Radiation Therapy (BINV-4).

2PBI may be administered prior to chemotherapy.

3Breast irradiation may be omitted in patients ≥79 y of age with estrogen-receptor positive, clinically node-negative, T1 tumors who receive adjuvant endocrine therapy (category 1).

BINV-2

Invasive Breast Cancer

LOCOREGIONAL TREATMENT OF CLINICAL STAGE I, IIA, OR IIB DISEASE OR T3, N1, M0

- Radiation therapy to chest wall + infracavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk (category 1). It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

- Strongly consider radiation therapy to chest wall + infracavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

- Consider radiation therapy to chest wall. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated.

- See BINV-4

- No radiation therapy

BINV-3

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Surgical tx

- Joerger et al. population based study of care of elderly patients with breast cancer (BC),
- 4820 pts 2003-2005
- Found >80 less likely to have BCT compared to mastectomy
- Less likely to have axillary staging
- Higher axillary recurrence 1% vs. 4% p<0.05
- Less likely to have adjuvant tx i.e. radiation with BCT

(A) Distribution of primary breast surgery by age subgroups according to tumor histology.

No Surgery Group

- Between 1990 and 2005, 584 patients with resectable breast cancer and not receiving surgery were identified at the five participating centres
- 187 (32%) patient choice no surgery
- No surgery group 92% endocrine tx

Fig. 1. National time-trends in surgical treatment for resectable breast cancer per age-group.


A Kaplan–Meier survival curve

(A) observed all-cause survival compared to expected survival

(B) breast-cancer related mortality compared to all other causes of death. Worse than expected mortality rate pts no surgery

Surgery vs Endocrine

- Cortadellos et al Barcelona Spain
- 465 pts single institution
- 75% std surgery vs 25% endocrine
- Matched co-morbidities Charleston index
- If life expectancy >2yrs and acceptable risk for anesthesia should have std surgical tx


**Fig. 1.** Differences in breast cancer-specific survival between the surgical and non-surgical treatment groups.


Surgical Comp

- Overall, 12% complications rate all types of treatment (26/208). There were 2 deaths, 1 after surgery and 1 related to chemotherapy.
- Surgery resulted in complications in 6% (11/188) of patients.
- Five percent (5/112) of patients who received radiation suffered adverse effects.
- Chemotherapy-related complications affected 30% (6/18) of treated patients.
- Hormonal agents resulted in complications in 3% (3/112) of patients.
- No correlation between the American Society of Anesthesiologists score and incidence of complication was observed ($P = .58$).

Surgical Comp Europe

- 140 operations for breast cancer were performed in 129 women 1990–2005
- Complications occurred in 37.1% of the cohort
  - 31.4% were minor complications and only 5.7% were major (stroke, heart attack, thromboembolic).
  - Intraoperative morbidity was 18.6% i.e. bleeding
  - Postoperative morbidity was 20%.
- Late complications occurred in 5% of patients.
- The most common complications were wound infections (50%).
- The perioperative mortality in this group of elderly women was zero.


Background

- ER/PR - poor prognosis
  - Less studied in elderly
- Elderly under-represented in clinical trials
- Treatment deferred
  - Comorbidities
  - Patient preference

Hypothesis

• Greater than Cardiovascular Mortality

• Undertreated

Methods

• SEER database

• Outcomes
  – Survival
  – Treatment

• Reference Age Group
Table 1. Demographics of all breast cancer patients

<table>
<thead>
<tr>
<th>% P&lt;.001 for all covariates.</th>
<th>Total patients (N=552,807)</th>
<th>Age 0-49 (26.46%)</th>
<th>50-79 (64.13%)</th>
<th>80 and older (9.41%)</th>
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<tbody>
<tr>
<td>Race</td>
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<tr>
<td>White</td>
<td>74</td>
<td>65.24</td>
<td>75.98</td>
<td>85.15</td>
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<tr>
<td>A-A Hispanic</td>
<td>9.44</td>
<td>11.93</td>
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<tr>
<td>Hispanic</td>
<td>7.12</td>
<td>9.41</td>
<td>6.69</td>
<td>3.59</td>
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<td>Marital Status</td>
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<tr>
<td>Single</td>
<td>12.88</td>
<td>19.47</td>
<td>10.96</td>
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<tr>
<td>Married</td>
<td>59.21</td>
<td>67.79</td>
<td>60.49</td>
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<td>Previously</td>
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<td>12.74</td>
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<td>Histology</td>
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<tr>
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<td>73.12</td>
<td>76.55</td>
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<td>Lobular</td>
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<td>10.00</td>
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<td>35.62</td>
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<td>2</td>
<td>40.88</td>
<td>48.79</td>
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<td>8.74</td>
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<tr>
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<td>Hormone Status</td>
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<td>ERPR negative</td>
<td>20.59</td>
<td>25.62</td>
<td>19.38</td>
<td>14.65</td>
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Table 2. Survival in ERPR negative and positive patients

<table>
<thead>
<tr>
<th>ERPR negative</th>
<th>ERPR positive</th>
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<tbody>
<tr>
<td>Breast Cancer Survival</td>
<td>Cardiovascular Survival</td>
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<tr>
<td>Age 0-49</td>
<td>.78 [.78-.79]</td>
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<tr>
<td>5 year</td>
<td>.74 [.73-.74]</td>
</tr>
<tr>
<td>10 year</td>
<td>.74 [.74-.75]</td>
</tr>
<tr>
<td>Age 50-79</td>
<td>.79 [.79-.8]</td>
</tr>
<tr>
<td>5 year</td>
<td>.74 [.74-.75]</td>
</tr>
<tr>
<td>10 year</td>
<td>.67 [.66-.69]</td>
</tr>
<tr>
<td>Age 80 and &gt;</td>
<td>.67 [.66-.69]</td>
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Table 3. Treatments in patients over 80

<table>
<thead>
<tr>
<th></th>
<th>Surgery (OR)</th>
<th>Radiation (OR)</th>
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<tbody>
<tr>
<td>ER/PR +</td>
<td>0.69 (0.62-0.78)</td>
<td>0.35 (0.34-0.36)</td>
</tr>
<tr>
<td>ER/PR -</td>
<td>0.81 (0.64-1.02)</td>
<td>0.42 (0.38-0.46)</td>
</tr>
</tbody>
</table>


Graph 1. Survival of the elderly by hormone status


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Strengths/Limitations

• Power

• No chemotherapy
• No comorbidities
  – dementia

Conclusions

• Elderly ERPR - more likely to die of breast disease than:
  – Younger patients
  – Cardiovascular disease

• Consider standard treatment regimens
Invasive Breast Cancer

LOCOREGIONAL TREATMENT OF CLINICAL STAGE I, IIA, OR IIB DISEASE OR T3, N1, M0

- Radiation therapy to whole breast with or without boost to tumor bed (category 1), infraclavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk (category 1). It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated. (See BINV-4)

- Radiation therapy to whole breast with or without boost to tumor bed (category 1). Strongly consider radiation therapy to infracavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated. (See BINV-4)

1See Principles of Radiation Therapy (BINV-4).
2PBI may be administered prior to chemotherapy.
3Breast irradiation may be omitted in patients ≥70 y of age with estrogen-receptor positive, clinically node-negative, T1 tumors who receive adjuvant endocrine therapy (category 1). (BINV-2)

Total mastectomy with surgical axillary staging (category 1) ± reconstruction

- ≥4 positive axillary nodes
- 1 to 3 positive axillary nodes
- Negative axillary nodes

- Radiation therapy to chest wall + infraclavicular region, supraclavicular area, internal mammary nodes, and any part of the axillary bed at risk. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated. (See BINV-4)
- Consider radiation therapy to chest wall ± infracavicular region, ± supraclavicular area, ± internal mammary nodes and any part of the axillary bed at risk. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated. (See BINV-4)
- Consider radiation therapy to chest wall. It is common for radiation therapy to follow chemotherapy when chemotherapy is indicated. (BINV-3)

- No radiation therapy

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Lumpectomy Plus Tamoxifen With or Without Irradiation in Women Age 70 Years or Older With Early Breast Cancer: Long-Term Follow-Up of CALGB 9343

- July 1994 and February 1999, 636 women (age ≥ 70 years) who had clinical stage I
- (ER) positive breast carcinoma treated by lumpectomy
- randomized to tamoxifen plus radiation therapy (TamRT; 317 women) or tamoxifen alone (Tam; 319 women).
- Primary end points were time to local or regional recurrence, frequency of mastectomy, breast cancer-specific survival, time to distant metastasis, and overall survival (OS).


CONSORT diagram
Time to local or regional recurrence


Overall survival


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Mortality rate < std tx

- 1,837 women > 65 + operations + stage I or II breast cancer in SEER.
- Compared with women receiving mastectomy, those receiving BCS without RT were twice as likely to die of breast cancer (adjusted hazards ratio [HR] = 2.19, 95% confidence interval [CI], 1.51 to 3.18).
- In the subset of 886 chemotherapy-naive women treated with tamoxifen, those treated with tamoxifen for less than 1 year had > breast cancer mortality rate than those exposed 5 years or more (adjusted HR = 6.26, 95% CI, 3.10 to 12.64).


Figure 1. Breast cancer survival over 10-year study period, adjusted for study site, age, race, comorbidity, number of positive nodes, receptor status, and histologic grade. BCS, breast-conserving therapy; MAST, mastectomy; RT, radiation therapy.

Conclusion

• Breast ca in the elderly is more likely to present with palpable masses
• Less likely to receive standard surgical tx
• Pts undergoing std surgical tx have better survival than pts having hormonal tx only
• Pts with triple neg disease have worse prognosis and are more likely to die of breast ca than cardiovascular disease
• Surgical tx has relatively low morbidity and mortality even in oldest pts

Summary

• Adjuvant radiation does improve local control and overall survival in aggressive histologies
• Tx should be individualized especially in pts <2yr expected survival
Conclusion

• Standard breast cancer tx including surgery + radiation should be considered in pts with a life expectancy > 2 years

Thank you!
Strategies for management of early stage breast cancer in older women: systemic therapy

Lee Schwartzberg MD, FACP
NCCN Annual Conference 2016
All adult oncologists are geriatric oncologists...

they just don’t know it yet

Aging of the Population

Source: United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2015 Revision. (Medium variant)
### Life Expectancy: Woman

<table>
<thead>
<tr>
<th>Age</th>
<th>Healthy</th>
<th>Average</th>
<th>Sick</th>
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<tbody>
<tr>
<td>65</td>
<td>20.0</td>
<td>18.5</td>
<td>9.7</td>
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<tr>
<td>70</td>
<td>15.8</td>
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<td>75</td>
<td>12.1</td>
<td>11.5</td>
<td>7.3</td>
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<td>80</td>
<td>8.8</td>
<td>8.4</td>
<td>5.9</td>
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<tr>
<td>85</td>
<td>6.1</td>
<td>5.9</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Extermann, et al. JCO 2000

### Breast Cancer Incidence and Mortality by age

**Median age diagnosis: 61 years**
- 41% in women > 65 years
- 21% in women > 75 years

**Mortality rate decline, 1990-2003**
- <70: 38%
- >70: 14%
- ER+: 19%
- ER-: 0%

Jatoi I, JCO 2007

SEER Data
Comparison of older vs. younger breast cancer stage

![Bar chart showing stage distribution](chart.png)

Fig. 2. Surveillance, Epidemiology, and End Results' description of stage distribution by cancer site (65 years of age and older versus less than 65 years of age [all races]), 2002 to 2011.
Paradox of breast cancer in the elderly

More favorable biology, less advanced stage, but…
WORSE BREAST CANCER SPECIFIC MORTALITY

WHY?
Undertreatment: surgery, RT, chemo, endocrine
Lack of evidence from clinical trials
Immune factors?

Breast Cancer Subtypes in Older Women

<table>
<thead>
<tr>
<th>Tumor Phenotype</th>
<th>Frequency</th>
<th>Natural History</th>
<th>Adjuvant Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR+ HER2-</td>
<td>75%</td>
<td>Slower growing, frequent relapses after 5 yrs</td>
<td>AI or Tam for most; Add Chemo for high risk</td>
</tr>
<tr>
<td>TNBC</td>
<td>15%</td>
<td>Almost all relapses &lt;5 yr</td>
<td>Chemo if expected improvement in survival &gt;3 %</td>
</tr>
<tr>
<td>HER2+</td>
<td>15%</td>
<td>Most recurrences w/in 5 yrs: ER+HER2+ have later relapses</td>
<td>Chemo + anti-HER2 therapy for most; endocrine for ER+</td>
</tr>
</tbody>
</table>
Evaluating Older Women for systemic treatment of breast cancer

OVERALL PROGNOSIS

- Adjuvant Online! (www.adjuvantonline.com)
- ePROGNOSIS (http://eprognosis.ucsf.edu/default.php)
- Predict (www.predict.nhs.uk/predict.shtml)

GERIATRIC ASSESSMENT

- Charlson
- VES-13
- G8
- Abbreviated CGA
- IADL (www.siog.org)

GOALS: RFS, OS
Avoid: Functional decline
Cognitive loss
Financial toxicity
Maintain independence

Invasive Breast Cancer

ADJUVANT ENDOCRINE THERAPY

Aromatase inhibitor\(^4\) for 5 y (category 1) or Tamoxifen for 2–3 y or Aromatase inhibitor for 2–3 y (category 1)

Aromatase inhibitor to complete 5 y of endocrine therapy (category 1) or Up to 5 y of an aromatase inhibitor (category 2B)

Tamoxifen to complete 5 y of endocrine therapy (category 1)

Postmenopausal at diagnosis

Tamoxifen for 4.5–6 y

Women with a contraindication to aromatase inhibitors, who decline aromatase inhibitors, or who are intolerant of the aromatase inhibitors

Aromatase inhibitor for 5 y (category 1) or Consider tamoxifen\(^2\) for additional 5 y to complete 10 y

Tamoxifen\(^1\) for 5 y (category 1) or Consider tamoxifen\(^2\) for up to 10 y

BINV-J

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EBCTSG Meta-analysis of AI vs. Tam

By age

Extended Letrozole therapy in older women (MA.17)
Use of 21 gene assay in Medicare population

70,000 pts with breast cancer
Use of assay increased from 1% to 10%; 2/3 in T1c

Impact of RS on Chemotherapy Use and Mortality by age

Older patients with low/intermediate recurrence scores have low risk of BCSM
Older patients with high recurrence scores have high risk of BCSM

Less chemotherapy use in older patients with high RS
Do older women take adjuvant endocrine therapy as well as younger?

CALGB 369901 Prospective registry

- 1288 women >65
- Assessed by frailty index
  - 76% robust
  - 18% prefrail
  - 4% frail
- Prefrail/frail were 1.63x as likely to never start endocrine therapy
- Discontinuation higher with increased age (p=.005) and lower stage (p=.003)

Effect of bisphosphonates on breast cancer

EBCTSG

Bone targeting agents (bisphosphonates, denosumab):
- Improve bone density,
- reduce fractures
- reduce recurrence rate

Consider in all post-menopausal patients with osteopenia/osteoporosis

Decision Making for chemotherapy in Elderly women

- Estimate survival using prognosis
- Review goals of treatment
  - Average survival < 5 years: Endocrine therapy for some; no chemotherapy
  - Average survival 5-10 years: Endocrine therapy for most
  - Average survival > 10 years: Consider chemotherapy if > 3% OS benefit at 10 years after accounting for shortened survival
  - Chemotherapy decision similar to that for younger patients

Why do older women get undertreated?

- Underestimation of
  - Fitness
  - Life expectancy
- Uncertainty of
  - Efficacy of treatment
  - Tolerance of treatment
Effect of Polychemotherapy on breast cancer mortality by age

EBCTSG Lancet 2012

AC/CMF vs. Capecitabine

CALGB 49907: Efficacy

Muss H, et a. NEJM 2009
CALGB 49907: Grade 3/4/5 Adverse Events

Muss H, et a. NEJM 2009

9735 7 year follow-up : TC vs. AC Subgroups analysis

Docetaxel 75 mg/m2 + cyclophosphamide 600 mg/m2 x 4 cycles vs. doxorubicin 60 mg/m2 + cyclophosphamide 600 mg/m2 x 4 cycles

Jones S et.al. JCO 2009,27:1177-82
TC: 9735 toxicity and survival

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>TC</th>
<th>AC</th>
<th>TC</th>
<th>AC</th>
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<td></td>
<td>&lt; 65</td>
<td>&gt; 65</td>
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<td>Anemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Neutropenia</td>
<td>0</td>
<td>1</td>
<td>54</td>
<td>62</td>
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<tr>
<td>Thrombocytopenia</td>
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<tr>
<td>Fibrinogen</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>4</td>
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</table>

Nonhematologic:
- Anemia
- Edema
- Fever
- Infection
- Myalgia
- Arthralgia
- Alopecia
- Nausea
- Vomiting
- Phlebitis

Abbreviations: TC, docetaxel/cyclophosphamide; AC, docetaxel/cyclophosphamide.

Jones S et al. JCO 2009;27:1177-82

ICE-II: EC/CMF vs. nabP/Cape

Stratification:
- Participating centre
- Risk assessment method
- Age groups
  - 55-69
  - 70-80
  - >90 years
- ER/PgR/HER2 status
  - ER- PgR-/HER2-
  - ER- PgR+/HER2-
  - HER2+

Arm A: Investigators choice

Arm B

Surgery

Nab-paclitaxel 100 mg/m² IV day 1, 8, 15 q22
(with a week of rest every six weeks) +
Capeoletinib 2000 mg/m² q22 x 6 cycles

Von Minckwitz, Cancer 2015
Results ICE-II

Efficacy

Primary Endpoint: Rx discontinuation and AEs

- 6.6% EC/CMF
- 35.8% nPX
- More heme tox with EC/CMF
- More non-heme tox with nPX

Von Minckwitz, Cancer 2015

AC vs. weekly paclitaxel

Shulman L, JCO 2014
Hospitalizations after adjuvant chemotherapy in ESBC: Older vs. younger

Barcenas JCO 2014
### Invasive Breast Cancer

### DOsing SCHEDULE FOR COMBINATIONS FOR HER2-POSITIVE DISEASE: PREFERRED REGIMENS

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Duration</th>
<th>Comments</th>
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<tbody>
<tr>
<td>AC followed by T chemotherapy with trastuzumab</td>
<td>21 days for 4 cycles</td>
<td>Followed by: Paclitaxel 80 mg/m² by 1 h IV weekly for 12 wks With: Trastuzumab 4 mg/kg IV with first dose of paclitaxel Followed by: Trastuzumab 2 mg/kg IV weekly to complete 1 y of treatment. As an alternative, trastuzumab 6 mg/kg IV every 21 days may be used following the completion of paclitaxel, and given to complete 1 y of trastuzumab treatment. Evaluate left ventricular ejection fraction (LVEF) prior to and during treatment.</td>
</tr>
<tr>
<td>AC followed by T chemotherapy with trastuzumab + pertuzumab</td>
<td>21 days for 4 cycles</td>
<td>Followed by: Pertuzumab 840 mg IV day 1 followed by 420 mg IV Followed by: Trastuzumab 8 mg/kg IV day 1 followed by 6 mg/kg IV Paclitaxel 80 mg/m² IV days 1, 8, and 15 Cycled every 21 days for 4 cycles</td>
</tr>
</tbody>
</table>

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All combination chemotherapy regimens
Few women >65 years old in the clinical trials

Risk of CHF in pts >65 with HER2+ ESBC

Chavez-McGregor, JCO 2013
APT Trial: Paclitaxel + Trastuzumab

Essentially no data for patients 80+

Recommendations for Adjuvant Chemotherapy in Older Breast Cancer Patients

<table>
<thead>
<tr>
<th>HER2-</th>
<th>Regimen</th>
<th>Evidence in Elderly</th>
<th>Recommendations</th>
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<tr>
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<td>AC-&gt;T</td>
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<td>CMF</td>
<td>Prospective</td>
<td>Feasible w/precautions</td>
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<td>TC</td>
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<td>Weekly doc</td>
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<td>TCH</td>
<td>No evidence</td>
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<td></td>
<td>TC-H</td>
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</tr>
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</table>

J Clin Oncol 20:2109-2117, 2002
Systemic Treatment of Breast Cancer in the Older Woman

- Treatment decisions should not be made by age alone
- Fit older patients can and do benefit from systemic chemotherapy
- With proper support standard therapies are tolerable
- Avoid under-treatment when therapy can be curative
- Avoid toxicity in palliative setting, frailty, dependence
- Maintain independence

"Age is an issue of mind over matter. If you don't mind, it doesn't matter."

Mark Twain
THANKS

- Stuart Lichtman and Noam VanderWalde for slides

- Hy Muss, visionary leader in studying older women with breast cancer