Management of Breast Cancer in Elderly

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- Medical Oncology
- Hôpital René Huguenin / Institut Curie, Saint-Cloud, France
Disclosures

• Research funding: TEVA (Cephalon), QIAGEN (Ipsogen)
• Advisory role: Amgen, Roche, Pierre Fabre
• Honoraria: GSK, Cephalon, Roche, AstraZeneca
A frailty revealed...

• 2006: Mrs BON... IR... 84 yo
  – No previous medical history (high blood sugar?)
  – Husband: 86 yo w/ severe advanced Parkinson, 2 children
  – Breast self exam → T1c N0 M0 left breast; 54 kg, 167 cm

• Conservative surgery + axillary lymph node dissection
  – Invasive ductal carcinoma, 17 mm, SBR II
  – 8 N-
  – ER- PgR-, Ki 67 40%, HER2-

• Adjuvant strategy
  – Chemotherapy with anthracylines (GERICO 06)? + XRT

• Scoring
  – Oncologist: PS 0 → “Easy! Go for it“
  – Geriatrician
    • Functional status, cognition, nutrition, GDS → OK
    • However! 3 falls < 1 year
... treatment decision process

- LVEF by MUGA scan normal
- Not in GERICO 06 trial, but OK for the oncology staff!
- The lady “accepted”....
... treatment decision process & respect

- LVEF by MUGA scan normal
- Not in GERICO 06 trial, but OK for the oncology staff!
- The lady “accepted”…. but DID she?

- Central venous access + 1 cycle of chemo → febrile neutropenia + severe stroke (cardiac arythmia?)
  - Chemotherapy stopped
  - Husband placed in nursing home
  - Delayed XRT
  - Recovered with neurological sequelae
  - Seniors residence
  - No relapse so far (last visit early 2014)
Pelike from Attica
480–470 BC
Musée du Louvre
Current dilemma and extreme positions

1. Therapeutic **nihilism**
   - Elderly patients **do not receive** any treatment

2. The **intermediate** position?
   - Elderly patients **may** benefit from treatments

3. Blind therapeutic **enthusiasm**
   - Elderly patients receive **futile/non beneficial** treatments

→ Place and role of **geriatrician** and **oncologist**
We live in an era of unprecedented, rapid and inexorable global ageing.
Projected number of cancer cases for 2000–2050 by age group (<45, 45–64, 65–84, 85+) based on projected census population estimates and delay-adjusted SEER-17 cancer incidence rates

Incidence of cancer from 2010 to 2030 (Smith JCO 2009)
- +11% < 65 yo
- +67% > 65 yo

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Hayat. The Oncologist 2007;12:20-37
Breast cancer incidence

Age 35-39 40-44 45-49 50-54 55-59 60-64 65-69 70-74 75+ Total
63.3 119.7 187.3 177.3 182.8 211.3 220 231.1 220.4 89.2

40% or 25% x 1.5 in 2030?

de Vathaire. FRANCIM/INSERM 1996, IVS 2003
Relative survival accounts for mortality from causes other than the relevant cancer, which can vary widely between countries.
• Most common shortcut in statistics
  “1 in 8 women will develop BC in their lifetime”
  instead of
  “If everyone lived beyond the age of 70, 1 in 8 of those women would get or have had BC”
• Since BC risk increases w/ age, lifetime risk changes depending on age
  - Age 20-29  1 in 2,000
  - Age 30-39  1 in 229
  - Age 40-49  1 in 68
  - Age 50-59  1 in 37
  - Age 60-69  1 in 26
  - Ever       1 in 8

Worldwidebreastcancer.com/breast-cancer-statistics-worldwide
Screening and diagnosis
Breast-cancer screening > 70?

**Cancer Screening Rates in Individuals With Different Life Expectancies**

Frederic J. Royce, MD, MS; Laura H. Hendrie, MS; William A. Stokes, MD; Jan M. Allen, MD, MPH; Ronald C. Chen, MD, MPH

**Table:**

<table>
<thead>
<tr>
<th>Age (yr)</th>
<th>Nb of trial(s)</th>
<th>Relative risk of death (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-69</td>
<td>Malmö &amp; Ostergöland</td>
<td>0.68 (0.54-0.87)</td>
</tr>
<tr>
<td>70-79</td>
<td>Ostergöland</td>
<td>1.12 (0.73-1.72)</td>
</tr>
</tbody>
</table>

**Invited Commentary**

Cancer Screening in Older Persons: A New Age of Wonder

Cary P. Gross, MD

75+: YES YOU CAN, but
- No mass screening
- Depends on life expectancy

Warner. NEJM 2011; Royce. JAMA 2014; Gross. JAMA 2014
- British Columbia Cancer Agency
- 1986-1992
- 4,046 patients

- Jules Bordet
- 2,723 patients

Local treatment
Trastuzumab use

60-64 vs 85+

36% vs 6%
p < .001

Moran. EBCC-9, abstract 415, 2014

Percentage of women with stage 1 or 2 disease and a Charlson score of 0 who underwent surgery (n=850)

\( p < 0.001 \)
Surgery + endocrine TTT vs ET only

**Survival (OS)**

<table>
<thead>
<tr>
<th>Study or sub-category</th>
<th>Surgery n/N</th>
<th>PET n/N</th>
<th>Peto OR (IPD) 95% CI</th>
<th>Weight %</th>
<th>Peto OR (IPD) 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 ER non-selected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRC</td>
<td>159/225</td>
<td>187/230</td>
<td></td>
<td>55.42</td>
<td>0.78 [0.63, 0.96]</td>
</tr>
<tr>
<td>GRETA</td>
<td>130/239</td>
<td>144/235</td>
<td></td>
<td>42.37</td>
<td>0.98 [0.77, 1.25]</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td><strong>464</strong></td>
<td><strong>465</strong></td>
<td></td>
<td><strong>97.79</strong></td>
<td><strong>0.86 [0.73, 1.01]</strong></td>
</tr>
<tr>
<td>Total events: 289 (Surgery), 331 (PET)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for heterogeneity: Chi² = 2.04, df = 1 (P = 0.15), P = 50.9%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for overall effect: Z = 1.88 (P = 0.06)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 02 ER positive only   |            |         |                      |          |                      |
| Nottingham Z          | 8/53       | 14/94   |                      | 2.21     | 0.80 [0.28, 3.22]    |
| **Subtotal (95% CI)** | **53**     | **94**  |                      | **2.21** | **0.80 [0.28, 3.22]**|
| Total events: 8 (Surgery), 14 (PET) |
| Test for heterogeneity: not applicable |
| Test for overall effect: Z = 0.41 (P = 0.68) |
| Total (95% CI)        | 517        | 559     |                      | 100.00   | 0.86 [0.73, 1.00]    |
| Total events: 297 (Surgery), 345 (PET) |
| Test for heterogeneity: Chi² = 2.05, df = 2 (P = 0.36), P = 2.5% |
| Test for overall effect: Z = 1.91 (P = 0.06) |

**Local Control**

<table>
<thead>
<tr>
<th>Study or sub-category</th>
<th>Surgery n/N</th>
<th>PET n/N</th>
<th>Peto OR (IPD) 95% CI</th>
<th>Weight %</th>
<th>Peto OR (IPD) 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC</td>
<td>36/226</td>
<td>115/230</td>
<td></td>
<td>69.59</td>
<td>0.25 [0.19, 0.32]</td>
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<tr>
<td>GRETA</td>
<td>27/239</td>
<td>111/235</td>
<td></td>
<td>30.41</td>
<td>0.38 [0.25, 0.57]</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>464</strong></td>
<td><strong>465</strong></td>
<td></td>
<td><strong>100.00</strong></td>
<td><strong>0.28 [0.23, 0.36]</strong></td>
</tr>
<tr>
<td>Total events: 63 (Surgery), 226 (PET)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for heterogeneity: Chi² = 2.90, df = 1 (P = 0.09), P = 65.5%</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Test for overall effect: Z = 11.02 (P &lt; 0.00001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hind. Cochrane Database Syst Rev. 2006
Primary endocrine treatment

1. Converting mastectomy into BCS
2. Allowing pre-habilitation
3. Non-operable patients
After BCS: TAM vs XRT + TAM (CALGB 9343)

334/636 deaths (21 i.e 6.3% due to BC)

Hughes. J Clin Oncol 2013
• **Omission if pT1 ER+? (NCCN)**
  – According to *life expectancy*
  – > 80 yo, multi-morbidities, good compliance to endocrine treatment?

• **Low risk patients**
  – Once-per-week fraction schedule (Whelan regimen)
  – Accelerated partial breast irradiation (APBI)
    • Larger radiation doses given to the localized tumour bed (instead of to the entire breast)
      → Spare extensive travel

• **Don’t neglect the psychological burden of recurrence!**

Khan. Semin Radiat Oncol 2012
Systemic treatment
Endocrine treatment

Relatively easy!
Benefit of AI according to age

<table>
<thead>
<tr>
<th>Study</th>
<th>&lt; 65</th>
<th>≥ 65</th>
<th>N</th>
<th>HR (CI 95%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATAC</td>
<td>5137</td>
<td>4229</td>
<td></td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>BIG 1-98</td>
<td>5143</td>
<td>2867</td>
<td>0.82</td>
<td>(0.67-0.99)</td>
<td>0.04</td>
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<tr>
<td>ITA</td>
<td>nr</td>
<td>nr</td>
<td>0.63</td>
<td>(0.40-1.00)</td>
<td>0.05</td>
</tr>
<tr>
<td>ABCSG / ARNO</td>
<td>1265</td>
<td>1959</td>
<td>0.63</td>
<td>(0.40-1.00)</td>
<td>0.05</td>
</tr>
</tbody>
</table>

AI superior    TAM superior
COMPLIANCE is the issue!!!

TAM

- Hot flushes
- Thrombosis & embolism
- Uterus cancer
- Gynecological tractus
- Vaginal discharge
- Cataract

Neurocognition

Sexuality

AI

- Arthralgias & myalgias
- Osteoporosis
- Fractures
- Dryness
- Cardiovascular
- Lipid profile

COMPLIANCE is the issue!!!
Chemotherapy

Less easy…
Doxorubicin, CHF and age

  - stage I to III BC, chemotherapy vs no
  - AC: younger, fewer comorbidities, advanced ($p=.001$)
  - CHF$^{10 \text{ years}}$ (%)

<table>
<thead>
<tr>
<th></th>
<th>AC</th>
<th>Other chemo</th>
<th>No chemo</th>
</tr>
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<tbody>
<tr>
<td>N</td>
<td>4,712</td>
<td>3,921</td>
<td>34,705</td>
</tr>
<tr>
<td>CHF (%)</td>
<td>38.4</td>
<td>32.5</td>
<td>29</td>
</tr>
</tbody>
</table>

- 66-70 years HR 1.26 (95% CI, 1.12-1.42) if AC
- 71-80 years no impact of CT type

<table>
<thead>
<tr>
<th>Baseline</th>
<th>HR</th>
<th>(95% CI)</th>
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</thead>
<tbody>
<tr>
<td>Age (decade)</td>
<td>1.79</td>
<td>(1.66-1.93)</td>
</tr>
<tr>
<td>Black</td>
<td>1.40</td>
<td>(1.30-1.50)</td>
</tr>
<tr>
<td>Trastuzumab</td>
<td>1.46</td>
<td>(1.21-1.77)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1.45</td>
<td>(1.39-1.52)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.74</td>
<td>(1.66-1.83)</td>
</tr>
<tr>
<td>Coronary</td>
<td>1.58</td>
<td>(1.39-1.79)</td>
</tr>
<tr>
<td>Left XRT</td>
<td>1.04</td>
<td>(0.98-1.11)</td>
</tr>
</tbody>
</table>

Adjuvant chemo for breast cancer

DFS

All

≤50

51-64

≥65

OS

All

≤50

51-64

≥65

Results

- Benefit identical
- Toxicity careful!!

- Toxic deaths 1.5%

CALGB (1975-1999)

4 randomized trials

6487 pts

> 65 yo 542 (8%)

> 70 yo 159 (2%)

Muss. JAMA 2005
Comparisons between different polychemotherapy regimens for early breast cancer: meta-analyses of long-term outcome among 100,000 women in 123 randomised trials

2012 Oxford

Low influence of age (< 70 yo), pN, pT, differentiation, ER or TAM
… mostly if ER-!
CALGB / CTSU 49907 (AC or CMF vs X)

Muss. NEJM 2009
General recommendations for adjuvant chemo in elderly

- **Focus** on ER-

- **Regimen**
  - Validated: 4 AC, 6 CMF
  - Option: 4 TC
  - Capecitabine: no
  - Sequential regimen: no data
  - Liposomal doxorubicin?

- **Primary prophylaxis** of febrile neutropenia w/ G-CSF

- **No restriction on trastuzumab if chemo indicated**
Targeted treatments

Lack of specific data
(for ex, in HERA: > 60 yo less than 16%)

but evidence of clinical benefit!
The incidence of CHF from the Finnish Herceptin Study (FINHER), Herceptin Adjuvant trial (HERA), Breast Cancer International Collaborative Group trial 006 (006) with TCH and AC-TH analyzed separately, the North Central Cancer Treatment Group trial 9831 (N9831), and NSABP B-31 (B-31).


- NSABP B31
  - Age
    - 2% < 50 yo vs 5.4% > 60 yo
  - LVEF > 4 AC
    - 12% if LVEF < 55%
  - Concomitant > sequential
  - Hypertension comedications

- B31/N9831
  - 6.7% pts who had completed AC had a lower LVEF or developed cardiac symptoms preventing the initiation of TZT
  - 1/3 pts who started TZT discontinued it: 4.7% with symptomatic CHF, 14.2% with confirmed asymptomatic decline in LVEF, and the rest for noncardiac reasons
Duration and Toxicity of Adjuvant Trastuzumab in Older Patients With Early-Stage Breast Cancer: A Population-Based Study

Ines Vaz-Luis, Nancy L. Keating, Nancy U. Lin, Huichuan Lii, Eric P. Winer, and Rachel A. Freedman

- SEER database
- 2,028 patients ≥ 66, stage I-III, 2005-2009, trastuzumab
  - 71.2% < 76
  - 66.8% wo/ comorbidities (Charlson)
  - 85.2% w/ chemotherapy
  - 81.7% w/ complete trastuzumab treatment (> 9 months)
  - Factors correlated w/ incomplete treatment
    - Age 80+ vs 66-70 OR 0.40 (0.30-0.55)
    - Comorbidities 2 vs 0 OR 0.65 (0.49-0.88)

Pertuzumab

Miles, Breast Cancer Res Treat 2013
## Table 4. Incidence of Grade ≥ 3 AEs by Patient Subgroup in T-DM1-Exposed Patients

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Total No. of Patients (N = 884)</th>
<th>No. of Patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt; 65</td>
<td>762</td>
<td>335</td>
<td>44.0</td>
</tr>
<tr>
<td>≥ 65</td>
<td>122</td>
<td>63</td>
<td>51.6</td>
</tr>
<tr>
<td>≥ 65 to &lt; 75</td>
<td>93</td>
<td>49</td>
<td>52.7</td>
</tr>
<tr>
<td>≥ 75</td>
<td>29</td>
<td>14</td>
<td>48.3</td>
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<tr>
<td>Race</td>
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<tr>
<td>White</td>
<td>692</td>
<td>288</td>
<td>41.6</td>
</tr>
<tr>
<td>Asian</td>
<td>99</td>
<td>63</td>
<td>63.6</td>
</tr>
<tr>
<td>Other</td>
<td>93</td>
<td>47</td>
<td>50.5</td>
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<tr>
<td>Baseline ECOG PS</td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
<td>605</td>
<td>345</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>370</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Number of disease sites</td>
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</tr>
<tr>
<td>&lt;2</td>
<td>665</td>
<td>377</td>
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<tr>
<td>≥3</td>
<td>354</td>
<td>200</td>
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<tr>
<td>Prior anthracycline therapy</td>
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<tr>
<td>Yes</td>
<td>605</td>
<td>345</td>
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<tr>
<td>No</td>
<td>370</td>
<td>160</td>
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<tr>
<td>Baseline liver metastases</td>
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<td></td>
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<tr>
<td>Yes</td>
<td>405</td>
<td>215</td>
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<tr>
<td>No</td>
<td>246</td>
<td>122</td>
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<tr>
<td>Baseline bone metastases</td>
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<td>Yes</td>
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<td>203</td>
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<tr>
<td>No</td>
<td>255</td>
<td>99</td>
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<tr>
<td>Prior ECOG PS status</td>
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<tr>
<td>PR-positive and PR-negative</td>
<td>545</td>
<td>270</td>
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<td>PR-negative and PR-positive</td>
<td>409</td>
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<tr>
<td>Unknown</td>
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<td>Baseline disease remeasurability</td>
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<tr>
<td>Yes</td>
<td>765</td>
<td>431</td>
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<td>No</td>
<td>319</td>
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<td>Menopausal status</td>
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<td>Premenopausal</td>
<td>451</td>
<td>303</td>
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<td>Perimenopausal</td>
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<tr>
<td>Postmenopausal</td>
<td>400</td>
<td>254</td>
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<tr>
<td>Unknown</td>
<td>65</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Prior systemic therapy for MBC</td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>678</td>
<td>383</td>
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<tr>
<td>No</td>
<td>188</td>
<td>91</td>
<td></td>
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<tr>
<td>Prior trastuzumab treatment for MBC</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>636</td>
<td>371</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>155</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: AE, adverse event; MBC, metastatic breast cancer; T-DM1, trastuzumab emtansine.
Bevacizumab

MBC L1

> 65 yo ≤ 20%

## ATHENA: CT wo/anthracyclines + beva

<table>
<thead>
<tr>
<th>%</th>
<th>&lt; 70</th>
<th>70+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 2,018</td>
<td>N = 233*</td>
</tr>
<tr>
<td>Hypertension grade ≥ 3</td>
<td>4.2</td>
<td>6.9</td>
</tr>
<tr>
<td>Proteinuria grade ≥ 3</td>
<td>1.5</td>
<td>4.0</td>
</tr>
<tr>
<td>ATE (A or V)</td>
<td>3.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Stop for toxicity</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>ATE</td>
<td>1.8</td>
<td>2.9</td>
</tr>
<tr>
<td>CHF</td>
<td>0.3</td>
<td>0.6</td>
</tr>
<tr>
<td>HTN</td>
<td>1.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

*175 (7.8%) 70+, 51 (2.3%) 75+, 7 (0.3%) 80+

Biganzoli. Annals Oncol 2011
• SEER database

• 3,039 patients ≥ 66, stage IV breast, lung, colon cancer, 2004-2007, bevacizumab
  – Contra-indication defined as 2 claims for thrombosis, cardiac disease, stroke, hemorrhage, hemoptysis, or GI perforation
  – Toxicity defined as 1st development of 1 condition > beva
  – Beva use associated w/ white race, later year of diagnosis, tumor type, and decreased comorbid conditions
  – 35.5% had contra-indication
    • Black race, increased age, comorbidity, later year of diagnosis, lower socioeconomic status, lung and CRC
  – If no contra-indication → 30% complication (black race)
Definition of “old” x ageing heterogeneity

<table>
<thead>
<tr>
<th>Age</th>
<th>Top 25\textsuperscript{th}%</th>
<th>50\textsuperscript{th}%</th>
<th>Lowest 25\textsuperscript{th}%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fit</td>
<td>Intermediate</td>
<td>Sick</td>
</tr>
<tr>
<td>50</td>
<td>40</td>
<td>33</td>
<td>24.5</td>
</tr>
<tr>
<td>70</td>
<td>21.3</td>
<td>15.7</td>
<td>9.5</td>
</tr>
<tr>
<td>75</td>
<td>17</td>
<td>11.9</td>
<td><strong>6.8</strong></td>
</tr>
<tr>
<td>80</td>
<td>13</td>
<td>8.6</td>
<td>4.6</td>
</tr>
<tr>
<td>85</td>
<td>9.6</td>
<td>5.9</td>
<td>2.9</td>
</tr>
<tr>
<td>90</td>
<td><strong>6.8</strong></td>
<td>3.9</td>
<td>1.8</td>
</tr>
<tr>
<td>95</td>
<td>4.8</td>
<td>2.7</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Women life expectancy

Walter JAMA 2001
Multimorbidities across age

Piccirillo, Critical Rev Oncol Haematol 2008
Co-morbidity @ AgeingStats.Gov

Percentage of people age 65 and over who reported having selected chronic conditions, by sex, 2005–2006

<table>
<thead>
<tr>
<th>Condition</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>37</td>
<td>26</td>
</tr>
<tr>
<td>Hypertension</td>
<td>52</td>
<td>54</td>
</tr>
<tr>
<td>Stroke</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Asthma</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Chronic bronchitis or Emphysema</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Any cancer</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Diabetes</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Arthritis</td>
<td>43</td>
<td>54</td>
</tr>
</tbody>
</table>

Note: Data are based on a 2-year average from 2005–2006.
Reference population: These data refer to the civilian noninstitutionalized population.
Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

http://www.agingstats.gov/Agingstatsdotnet/Main_Site/Data/2008_Documents/Health_Status.aspx
Competing causes of mortality

Deaths attributed to the primary cancer (solid dots) and those attributed to comorbidity (open circles).

Kendal. Cancer 2008
Balance of goals according to age

- Young patient
  - Social and family obligations (children)
  - Quantity of life +++

- Oncology
  - Therapies and innovation
  - Toxicity, response, survival
    - RECIST
    - NCI CTC v4.0
    - Survival
      - DFS, PFS, DDFS, OS
  - Fast-moving world
  - "Molecular portrait" of tumour & GEP

- Elderly patient
  - QoL+++
  - Independence
  - Staying at home

- Geriatrics
  - Symptoms, diagnosis
  - Quality of survival, i.e. amount of life with good QoL
    - Cognition
    - Functional status
    - QoL
    - Nutrition, etc.
  - Requiring time
  - "Global portrait" of patient & CGA
A GENE-EXPRESSION SIGNATURE AS A PREDICTOR OF SURVIVAL IN BREAST CANCER

25,000 genes, 78 tumours, 70 genes, 17 pN0, all < 55 yo

van’t Veer, Nature 2002; van de Vijver, NEJM 2002
MINDACT

- 6,600 pts < 70
  - FEB 2007-AUG 2011
  - 11,291 registered pts
  - 6,673 enrolled (59.1%)

Fig. 2 – MINDACT design.
4-year mortality score in general elderly population

Health retirement study
- > 50 yo (40% > 70 yo)
  - Construction 11,701 subjects
  - Validation 8,009 subjects

Box. Four-Year Mortality Index for Older Adults

1. Age __________________________
   60-64: 1 point
   65-69: 2 points
   70-74: 3 points
   75-79: 4 points
   80-84: 5 points
   ≥85: 7 points

2. Sex (Male/Female)
   Male: 2 points

3. a. Weight: __________________________
   b. Height: __________________________
   703 × (weight in pounds/height in inches²)
   BMI < 25: 1 point

4. Has a doctor ever told you that you have diabetes or high blood sugar? (Y/N)
   Diabetes: 1 point

5. Has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (Y/N)
   Cancer: 2 points

6. Do you have a chronic lung disease that limits your usual activities or makes you need oxygen at home? (Y/N)
   Lung Disease: 2 points

7. Has a doctor told you that you have congestive heart failure? (Y/N)
   Heart Failure: 2 points

8. Have you smoked cigarettes in the past week? (Y/N)
   Smoke: 2 points

9. Because of a health or memory problem do you have any difficulty with bathing or showering? (Y/N)
   Bathing: 2 points

10. Because of a health or memory problem, do you have any difficulty with managing your money—such as paying your bills and keeping track of expenses? (Y/N)
    Finances: 2 points

11. Because of a health problem do you have any difficulty with walking several blocks? (Y/N)
    Walking: 2 points

12. Because of a health problem do you have any difficulty with pulling or pushing large objects like a living room chair? (Y/N)
    Push or Pull: 1 point

Total Points: __________________________

Score ≥ 8 = 25% of 70+
Score ≥ 8 = 50% of 75+

AUC=0.7239
AUC=0.7601
AUC=0.7708
5 key messages for elderly BC patients

1. **Under and over-treatment** are frequent
2. **Access to innovation** is unbalanced
3. **Geriatric problems** are far more frequent than usually believed
   - 2/3 impaired G8, > 50% functional dependence, >10% cognitive dysfunctions, 20% depression, > 40% significant comorbidities, > 50% risk of malnutrition, polypharmacy, etc.
4. **Comprehensive Geriatric Assessment CGA**
   - Brings to clinicians new information in > 2/3 cases
   - Modifies clinical decision in 20-25% cases (function & nutrition)
5. **Competing risks for mortality**
   - call for a certain degree of assessment of life expectancy to balance treatment decision

Bode. EBCC9 2014, abstract 414
Management of elderly patients with breast cancer: updated recommendations of the International Society of Geriatric Oncology (SIOG) and European Society of Breast Cancer Specialists (EUSOMA)

Laura Biganzoli, Hans Wildiers, Catherine Oakman, Lorenza Marotti, Sibylle Loibl, Ian Kunkler, Malcolm Reed, Stefano Ciattò, Adri C Vooogd, Etienne Brain, Bruno Cutuli, Catherine Terret, Margot Gosney, Matti Aapro, Riccardo Audisio

As the mean age of the global population increases, breast cancer in older individuals will be increasingly encountered in clinical practice. Management decisions should not be based on age alone. Establishing recommendations for management of older individuals with breast cancer is challenging because of very limited level 1 evidence in this heterogeneous population. In 2007, the International Society of Geriatric Oncology (SIOG) created a task force to provide evidence-based recommendations for the management of breast cancer in elderly individuals. In 2010, a multidisciplinary SIOG and European Society of Breast Cancer Specialists (EUSOMA) task force gathered to expand and update the 2007 recommendations. The recommendations were expanded to include geriatric assessment, competing causes of mortality, ductal carcinoma in situ, drug safety and compliance, patient preferences, barriers to treatment, and male breast cancer. Recommendations were updated for screening, primary endocrine therapy, surgery, radiotherapy, neoadjuvant and adjuvant systemic therapy, and metastatic breast cancer.
SIOG 2014
INTERNATIONAL SOCIETY OF GERIATRIC ONCOLOGY
LISBON PORTUGAL
23 - 25 OCT.
14th SIOG Meeting, Lisbon - Portugal
SAVE THE DATE - 23 to 25 October 2014