What is New in Geriatric Oncology: The Medical Oncology Perspective

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City of Hope
Geriatric Oncology within the Last Year

- PubMed Database
  - Search Criteria:
    - Cancer
    - Aged ≥ 65
    - Clinical Trials
    - English
    - Published in the last year
  - Total Results → 2733 articles

- Results Further Filtered Based on:
  Journal Impact Factor & Variety in Subject Matter
Geriatric Oncology within the Last Year

Main Focus:

- Therapeutic Trials in Older Adults with Cancer
- Impact of Cancer Diagnosis and Treatment on:
  - Quality of Life (QOL)
  - Physical Function and Frailty
- Intervention Studies → How to Improve QOL
Therapeutic Studies:

Challenge the Concept of

Is “Less Really More?”
Benefits of Bevacizumab in Older Patients with Metastatic Colorectal Cancer

Retrospective Analysis of 2 Randomized Studies
First-line Metastatic Colorectal Cancer
439 Patients, Age ≥ 65

IFL Regimen: Irinotecan, Fluorouracil, Leucovorin
Or
FU/LV Regimen: Fluorouracil, Leucovorin

Randomize

N=221
Chemo + Placebo

N=218
Chemo + Bevacuzimab

Kabbinavar et al, J Clin Oncol, 2009
Progression-Free Survival in Older Patients treated with Bevacuzimab + Chemo

HR=0.52, P<0.0001

Kabbinavar et al, J Clin Oncol, 2009
Overall Survival in Older Patients treated with Bevacuzimab + Chemo

Kabbinavar et al, J Clin Oncol, 2009

HR=0.70, P=0.006
Benefits of Bevacizumab in Older Patients with Metastatic Colorectal Cancer

- Adding Bevacuzimab to FU-based chemo results in:
  - Prolongation of Overall Survival
  - Prolongation of Progression-Free Survival

- Bevacuzimab based therapy associated with:
  - Increased risk of bleeding, proteinuria, hypertension, arterial thromboembolic events

- Decisions regarding use of Bevacuzimab-based treatment should not be dependent on age alone

Kabbinavar et al, J Clin Oncol, 2009
Safety and Efficacy of Sorafenib in Older vs Younger Patients with Renal Cancer

Retrospective Subgroup Analysis
Renal Cancer Global Evaluation Trial
Advanced Renal Cell Carcinoma

Younger (N=787)
Age < 70

Older (N=115)
Age ≥ 70

Randomize
N=407 Placebo
N=381 Sorafenib
N=45 Placebo
N=70 Sorafenib

Progression-free Survival of Patients with Renal Cell Carcinoma

Efficacy of Melphalan, Prednisone, & Thalidomide in Patients with Myeloma ≥ Age 75

Randomize

N=113
MP plus thalidomide

N=116
MP plus placebo

75 and older
Stage II, III or high-risk
Stage I
Newly diagnosed with multiple myeloma

Hulin et al, J Clin Oncol, 2009
Progression-Free Survival by Treatment Arm

HR=0.62, P=.001

Hulin et al, J Clin Oncol, 2009
Overall Survival by Treatment Arm

HR=0.68, P=.028

Hulin et al, J Clin Oncol, 2009
Untreated patients with primary AML
≥16 years of age
Known karyotype

Younger (N=520)
Age < 60

Older (N=764)
Age ≥ 60

Randomize

N=353
TAD-HAM

N=167
HAM-HAM

N=451
TAD-HAM

N=313
HAM-HAM

Buchner et al, J Clin Oncol, 2009
Remission Duration by Age Group and Treatment Arm

Buchner et al, J Clin Oncol, 2009
Overall Survival by Age Group and Treatment Arm

Buchner et al, J Clin Oncol, 2009
High-Dose Daunorubicin in Older Patients with AML

Age ≥ 60
AML or high-risk refractory anemia
Cytarabine dose standard

N=411
45 mg/m² daunorubicin (Conventional)

N=402
90 mg/m² daunorubicin (Escalated)

Conventional vs Escalated Dose of Daunorubicin in Older Patients with AML

High-Dose Daunorubicin in Older Patients with AML

- Escalated dose yielded a:
  - More rapid response
  - Higher response rate

- No significant difference was found in:
  - Survival end points
  - Hematologic toxicity
  - Adverse events

Adjuvant Chemotherapy in Older Women with Early-Stage Breast Cancer

65 and older
≥ 1 cm and any N
Hormonal Rx per MD
PS of 0 to 2
QOL, compliance and tumor biology

Randomize

N=326
CMF x 6 or
AC x 4

N=307
Capecitabine x 6

Relapse-free Survival by Treatment Arm

Relapse-Free Survival By Treatment Arm

Proportion Relapse-Free

Years From Study Entry

# Patients at Risk

CMF/AC

Cape

P=0.0009

Muss et al, NEJM 2009
Overall Survival by Treatment Arm

Overall Survival By Treatment Arm

P=0.019

# Patients at Risk

Years From Study Entry

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<th>Years</th>
<th>CMF/AC</th>
<th>Cape</th>
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<td>307</td>
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Muss et al, NEJM 2009
Older Adults Benefit from Therapy

but

Are They Receiving It?
Older Women with Breast Cancer: Referral, Receipt, & Completion of Chemotherapy

A study of 1,090 women aged ≥65 years with early Breast cancer and at high risk of recurrence

- 68% Not discussed/referred
- 12% Not received
- 17% Incomplete
- 3% Completed

Buist et al, J Clin Oncol, 2009
% of Patients Who Did Not Receive Chemotherapy

By Age group

Buist et al, J Clin Oncol, 2009
Reasons for Not Referring for Chemotherapy

➢ Most common reasons:

▪ Treatment was not indicated

▪ Older age

▪ Presence of comorbid medical conditions

▪ Other reason

Buist et al, J Clin Oncol, 2009
Geriatric Assessment vs Clinical Judgment

- 84 consecutive patients age > 65 years
- Diffuse large cell lymphoma (DLCL)
- Comprehensive Geriatric Assessment (CGA)
  - Fit vs Unfit
    - Fit → < 80 years; ADL independent; < 3 comorbidities by CIRS-G; no geriatric syndromes
- Treatment decisions made by MD
  - based upon clinical judgment
  - blind to the CGA results

Tucci et al, Cancer, 2009
Geriatric Assessment More Effective Than Clinical Judgment

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<th>Fit</th>
<th>Unfit</th>
<th>P Value</th>
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<tr>
<td>Overall Survival</td>
<td>Not Reached</td>
<td>8 months</td>
<td>&lt;0.0001</td>
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</table>

CGA is more effective in identifying patients who benefit from curative therapy.

Tucci et al, Cancer, 2009
The Cancer Experience:
Impact on Quality of Life & Function
Impact of Cancer of Health-Related QOL (HRQOL) of Older Americans

1,432 cancer patients aged ≥ 65 and 7,160 matched non-cancer controls

The SEER cancer registry data were linked with the Medicare Health Outcomes Survey (MHOS) data

Examined change in HRQOL score measured by MOS SF-36:

Physical
- Physical Functioning
- Role-physical
- Bodily pain
- General health

Mental
- Vitality
- Social functioning
- Role-emotional
- Mental health

Reeve et al, J Natl Cancer Inst, 2009
Score Change in Physical Health

Reeve et al, J Natl Cancer Inst, 2009
Score Change in Mental Health

Reeve et al, J Natl Cancer Inst, 2009
Cancer Diagnosis Associated with Vulnerability and Frailty

- Cross-sectional study → 12,480 community-dwelling elders
- 2003 Medicare Current Beneficiary Survey
- Evaluated:
  - Disability: ADL and IADL limitations
  - Geriatric Syndromes: dementia, memory loss, depression, falls, incontinence, and osteoporosis
  - Vulnerability: VES-13 (Score 3 or higher)
  - Frailty: Balducci criteria (≥ 85 years, ADL limitation, geriatric syndromes, ≥ 3 comorbidities)

Mohile et al, J Natl Cancer Inst, 2009
Cancer Diagnosis Associated with Vulnerability and Frailty

Mohile et al, J Natl Cancer Inst, 2009
Interventions Studies:

Focus on the Quality of Survival
Effects of Home-Based Diet and Exercise on Functional Outcomes Among Older, Overweight Long-term Cancer Survivors

65 and older
Over-weight (BMI $\geq 25$ and $< 40$)
Long-term ($\geq 5$ years) Survivors

N=319
Intervention Group

N=322
Delayed Intervention Group

Morey et al, JAMA, 2009
Reach out to ENhancE Wellness (RENEW)

- A 12-month, home-based tailored program includes:
  - Telephone counseling
  - Personalized workbook of exercise and diet

Outcomes

- Change in functional status (SF-36)
- QOL (SF-36), diet, BMI

Morey et al, JAMA, 2009
Change in Physical Function and QOL

Change in Physical Function

Change in QOL

Adjusted $P=.03$

Morey et al, JAMA, 2009
Palliative Care Intervention for Patients with Advanced Cancer

Patients with a life-limiting cancer
Within 8 to 12 weeks of a new diagnosis of GI, lung, GU, and breast

N=161 Intervention
N=161 Usual Care

Randomize

Bakitas et al, JAMA, 2009
QOL, Symptom Intensity, and Mood Scores by Treatment Group

**QOL:**  
*P*=0.02

**Symptom Intensity:**  
*P*=0.06

**Depression:**  
*P*=0.02

*Bakitas et al, JAMA, 2009*
Overall Survival by Treatment Group

Log-rank $P = .14$

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<th>Usual care</th>
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<td>No. at risk</td>
<td>161</td>
<td>161</td>
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<tr>
<td>0 mo</td>
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<td>36 mo</td>
<td>16</td>
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Bakitas et al, JAMA, 2009
Palliative Care Intervention for Patients with Advanced Cancer

- Integration of a nurse-led palliative care intervention concurrent with anticancer treatments in the intervention group demonstrated:
  - higher QOL
  - lower depressed mood
  - limited effect on symptom intensity scores and use of resources

- No difference in survival curve

Bakitas et al, JAMA, 2009
The geriatric oncology evidence base is growing!

Older adults benefit from cancer treatment
  - Most studies done in the “fit” elderly
  - Need additional studies in the “frail” elderly
  - Need better tools to stratify which older adults benefit from treatment

Cancer impacts QOL and physical function

Interventions can improve the quality of survival
Thank you!