Falls in older patients with cancer: Impact on treatment, fall assessment and reporting

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POLL QUESTION

What category of older adults do you work with?

- Community-dwelling
- Long-term care
- Palliative care
Background

• Falls are common among older adults (OA)

• 1/3 of community-dwelling OA fall each year

• Leading cause of hip fractures and nursing home placement

• 6\textsuperscript{th} leading cause of death in OA

CDC (2014); PHAC (2005); WHO (2001)
Falls and Cancer

• Falls in OA with cancer are of added concern.

Why do you think this is? What are some unique risk factors that may affect the geriatric subgroup of cancer patients?

Type your answers in the chat box!
Falls and Cancer

- Falls in OA with cancer are of added concern.
- Cancer and its treatment bring unique risks:
  - Bone malignancies and bone metastases
  - Radiation therapy
  - Aromatase inhibitors & ADT
  - Mucositis & volume depletion
  - Myelosypression
  - Sarcopenia
  - Peripheral neuropathy

Klepin et al. (2015); Luciani (2012); Silbermann & Roodman (2011); Elliott et al. (2011); Balducci (2009); Loblaw et al. (2004); Hadji (2009); Mincey et al. (2006); Michaud (2006); Holzbeierlein et al. (2003);
So what?

- Population is aging
- Baby boomers started turning 65 in 2010
- Cancer is an age-associated disease
• Fall rates up to 78% over 3 months
• More injurious falls in older cancer patients receiving double-agent chemotherapy
• Significant predictors for fall-related injuries
  • Age $\geq$ 70
  • Cancer stage
  • Osteoporosis
• Patients receiving ADT sustained more falls and fractures (vs. no ADT and healthy OA)

Sattar et al. (2016)
Gaps in knowledge

- Few data on circumstances of falls
- No data on how falls are assessed and managed in geriatric oncology
- No data on how falls impact cancer treatment in OA
Research Questions

1. What are the circumstances of falls in this population?
2. What is the level of fear of falling (FOF) in the post-fall context in this population?
3. What is the impact on cancer treatment in community-dwelling older cancer patients?
4. How do older adults with cancer report falls?
5. How do oncologists assess and manage falls?
6. What are the perspectives of oncologists in terms of older patients’ fall reporting?
Convergent-parallel mixed methods

- Research questions
  - Quantitative data collection
    - Quantitative data analysis
      - Descriptive statistics
  - Qualitative data collection
    - Qualitative data analysis
      - Thematic analysis

- Merging/convergence of both sets of results
- Interpretation of the converged results
## Overview of data collection

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Quantitative Data Collection</th>
<th>Qualitative Data Collection</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Patient self-report survey</td>
<td>Chart review</td>
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<tr>
<td>Impact of falls on treatment</td>
<td>✓</td>
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<td>Oncologists’ fall assessment and management</td>
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<td>Circumstances of falls</td>
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<td>Fear of falling</td>
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<td>Older patients’ reporting</td>
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<td>Oncologists’ perspective on older patients’ fall reporting</td>
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- Impact of falls on treatment
- Oncologists’ fall assessment and management
- Circumstances of falls
- Fear of falling
- Older patients’ reporting
- Oncologists’ perspective on older patients’ fall reporting
Data Collection

Sample Size: 100

Inclusion Criteria:

• Community-dwelling
• Age ≥ 65
• Hematological malignancies or solid tumours – *EXCEPT* brain tumours/brain metastases
• Experienced at least one fall in the past 12 months
• Estimated life expectancy of at least 6 months
• Able to communicate in English
• No significant cognitive impairment (as per oncologist)

Castro et al. (2010)
Methods – recruitment procedure

• Approached staff of medical, radiation, and Older Adults with Cancer (OACC) clinics on daily basis
  – Patients who agreed were approached while waiting to be seen or after being seen by oncologist

• Flyers in waiting areas (oncology clinics; chemo daycare)
Data Analyses

- Descriptive statistics - quantitative data
- Thematic analysis - qualitative data
RESULTS
<table>
<thead>
<tr>
<th>Sample</th>
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<tr>
<td><strong>n=100 (response rate: 92%)</strong></td>
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<tr>
<td><strong>Median age</strong></td>
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<td><strong>% male</strong></td>
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<tr>
<td><strong>Years of education ≥ 13 years</strong></td>
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<td><strong>Living alone</strong></td>
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<tr>
<td><strong>Have at least 1 functional limitation (IADL)</strong></td>
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<td><strong>Cancer Stages</strong></td>
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<td><strong>Most common cancer site</strong></td>
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Results

- A total of 168 falls were recounted and described by the 100 participants.
- Injurious fall rate: 45%
- Serious injuries (e.g. bone fracture and head injury): 13%
- >=2 falls: 56 (56%) Recurrent fallers
## Q1  Circumstances of Falls

### Location and timing:
- Sixty-one (36%) of the falls occurred at home
- The majority of the falls (47%) occurred in the afternoon

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Bedroom</td>
<td>10%</td>
</tr>
<tr>
<td>Bathroom</td>
<td>12%</td>
</tr>
<tr>
<td>Staircase</td>
<td>9%</td>
</tr>
<tr>
<td>Living Room</td>
<td>14%</td>
</tr>
<tr>
<td>Sidewalk curb</td>
<td>9%</td>
</tr>
</tbody>
</table>
Most common activities:

- Walking (31%)
- Changing position (getting up from sitting or from standing to sitting) (8%)
- Going up/down stairs (7%)
- Negotiating curb/step (7%)
- Turning (4%)

Among those whom use of walking aid was normally indicated (n=50), 19 of the falls (38%) involved not using walking aid.
Key Theme: Cause of Fall

“Bad turn”
Fall occurred while turning one’s body around.

“I turned around and went down.”
(Female, 76, breast cancer)

“I don’t do turns very well.”
(Male, 78, prostate cancer)
“Not lifting foot high enough”

occurred during negotiation of sidewalk curb or stairs, and was attributed as a cause of falls by participants.

“I just tripped on the stairs because I didn’t lift my foot high enough and I tripped on the stairs and that was it.” (Male, 65, hematological cancer)

“Blaming oneself”

Attributing the fall to one’s own bad decision and ‘foolishness’.

“I thought it was a stupid thing on my part too.” (Female, 88, breast cancer)

“I was rushing to go over to my brother’s place, so dumb, dumb, dumb, dumb!” (Female, 77, gynecological cancer)
Key Themes: Opportunity for Education

“Reluctance to use walking aid”
falling as a result of not using one’s walking aid (for those who were normally using one).

“I didn’t want to use it. I felt I could walk okay. But I could walk okay. But when the leg gives out, it gives out. You can do nothing about that.” (Male, 72, prostate patient)

“I don’t need nothing.” (Female, 90, gynecological cancer)
Caregiver: “…..five weeks ago, he wanted to go feed the birds, he wanted to walk out, and I told him, “look, it’s icy out there, but no he had to feed the birds...... and so he fell on the ice. He took two steps from the door and fell on the ice. So a lot of stuff he doesn’t reason and doesn’t, um, you know, sort of think things through.” (Male, 71, pancreatic cancer)
Q2 Level of Fear of Falling in the Post-Fall Context

• High FOF: 55%

• Key theme: ‘Perception of falls’, subtheme “Extra caution to avoid further falls”
  • Being extra careful or taking up strategies (slowing down, changing rug etc.) to prevent further falls
  • However, reducing activity was rare. Some participants actually made effort to maintain/increase activity
Five patients (7%) experienced impact on cancer treatment
- Interruption of treatment \( n=3 \) (4%)
- Stopping of treatment \( n=1 \) (1%)
- Dose reduction \( n=1 \) (1%)

Discrepancy noted between chart review and patient survey

The 5 cases of impacted treatment involved 4 oncologists
- 2 did not participate, input from 2 oncologists

Patients’ falls led to interruptions in treatments; however, the subsequent impact/effect on the patients’ disease trajectory and prognosis was minimal
Q4 Reporting Falls to Oncologists

Patient survey: 72 out of 168 falls (43%) were not reported to oncologists.

Key Theme: Perception of Falls

- Belief that falls are something that comes with aging
- Not the cancer specialist’s job to hear about falls

“He’s a cancer doctor, not a fall doctor.” (Male, 82, prostate cancer)
Key Theme: Communication

Not worth mentioning

“‘You are the first person who asked me (about falls).’” (Male, 82, prostate cancer)

Oncologist didn’t ask

“Well like I said, those were just minor incidents, there’s really not much to tell.” (Male, 80, prostate cancer)

“I spend my life in the hospital (cancer centre) now, I don’t need to see my family doctor.” (Male, 70, hematological cancer)

Rarely see family physician (FP)
Reporting falls to HCP

![Bar chart showing reporting to various healthcare professionals.](image)
• 13/14 oncologists don’t routinely ask about falls

• Corroborated by chart review:
  • Only 11% of participants’ charts had documentation of assessment of falls
  • Out of the 72 falls reported to oncologists by patients, only 46 (64%) were documented on their chart
“...not as a general routine. So if I have concerns in patients with bone metastases, osteoporosis, I may pay attention to that; but often times there are many other things to discuss, so that may be one thing that I don’t think about as often as I should.” (Oncologist Y).

“The issue is having the time to ask about so many different possible symptoms.” (Oncologist X)
Key Theme: Fall Management

- Corroborates finding from patient survey - most common management were:
  - 37 (56%) asking circumstances of falls.
  - 10 (15%) performing physical examination
  - 9 (14%) making referrals
Q6  Oncologists’ Perspective of Forthcomingness

Key Theme: Patients’ Fall Reporting

“Not forthcoming”

Older patients rarely mention their falls unless directly asked

“They wouldn’t report it unless we ask.”
(Oncologist X)

“They often minimize it.”
(Oncologist Y)

“Downplaying Falls”

Minimize their falls when subject does come up.
Community dwelling older adults fall similarly whether or not they have cancer.
Summary of findings

• Falls ......
  – were not commonly reported by older cancer patients to their oncologists
  – were rarely assessed by oncologists
  – could potentially impact older patients’ cancer treatment regimens

• Many reported falls were not documented

• Older patients often did not see their family physicians regularly or had not visited their family physician since their cancer diagnoses
Drawing parallels

• Falls in this population may go underreported and under-recognized. Missed opportunities

• Reluctance to use walking aid aligns with research in general geriatric population and may be related to stigma associated with walking aids

• Attributing falls to external circumstances or one’s own fault may be associated with rejection of notion of “being vulnerable to falls”

Guerard (2015); Fraser (2015); Dollard (2012); Overcash (2010)
Implications

For Research
• Multi-site recruitment
• Larger more diverse sample
  Prospective
• >1 data source
• More research needed to examine the relationship between cancer treatment and falls

For Clinical Practice
• Ask about falls at each appointment
• Health teachings
  – Risky activities within the context of cancer treatment and side effects
  – Techniques to “fall safely”
  – Exercise promotion
• Be mindful of language
• Simple tests can be administered in waiting rooms
Exercise/physical activity

- The intensity of activity should take into account the older adult’s aerobic fitness (assessment).
- Recommended activities are those which can help maintain/increase flexibility.
- Promotion of activity should emphasize moderate-intensity aerobic activity, muscle-strengthening activity, reducing sedentary behavior, and risk management.
- Balance exercises are especially recommended for those at risk for falls.

Nelson (2013)
My next studies

• Using mixed methods approach to examine older adults’ knowledge/awareness regarding increased risks for falls and fall-related injuries within the oncology context, as well as explore their perception regarding use of walking aid.

• A multi-site examination of impact of falls on cancer treatment and functional outcomes in older adults with cancer.

• A pilot intervention study to examine the effectiveness of strength-training classes (with collaborators in physiotherapy and/or rehab sciences) that incorporate tips on how to ‘fall safely’ on falls and injury prevention.
Conclusion

• More research is needed to examine the impact of falls in this population

• Results of this study could help:
  • Increase oncology care teams’ awareness of importance of falls and fall assessment
  • Inform the development and planning of fall safety guidelines, education intervention, and supportive care-oriented services
Communities/Resources

• The Nursing and Allied Health Group (NAH) of the International Society of Geriatric Oncology (SIOG) are currently working on a summary of recommendations for fall prevention and management based on the most recent systematic reviews and fall safety guidelines.

• RNAO Preventing Falls and Reducing Injuries from Falls, 4th ed.

• Falls Prevention Program: Falls New Assessment clinic, The Falls Education and Exercise classes (Toronto Rehab)
POLL QUESTION

Did you find today’s presentation informative/helpful?
- Yes
- Somewhat
- No

What other information would you like to receive?
Please type your answers in the chat box
Thank you
Questions?

Type your questions into the chat box.

OR

Dial *7 on your telephone to unmute.
Dial *6 when you are finished speaking to re-mute.

*This webinar is being recorded.*
The slide deck and recording will be emailed after the webinar.
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