Building a Geriatric Oncology Program: Lessons Learned

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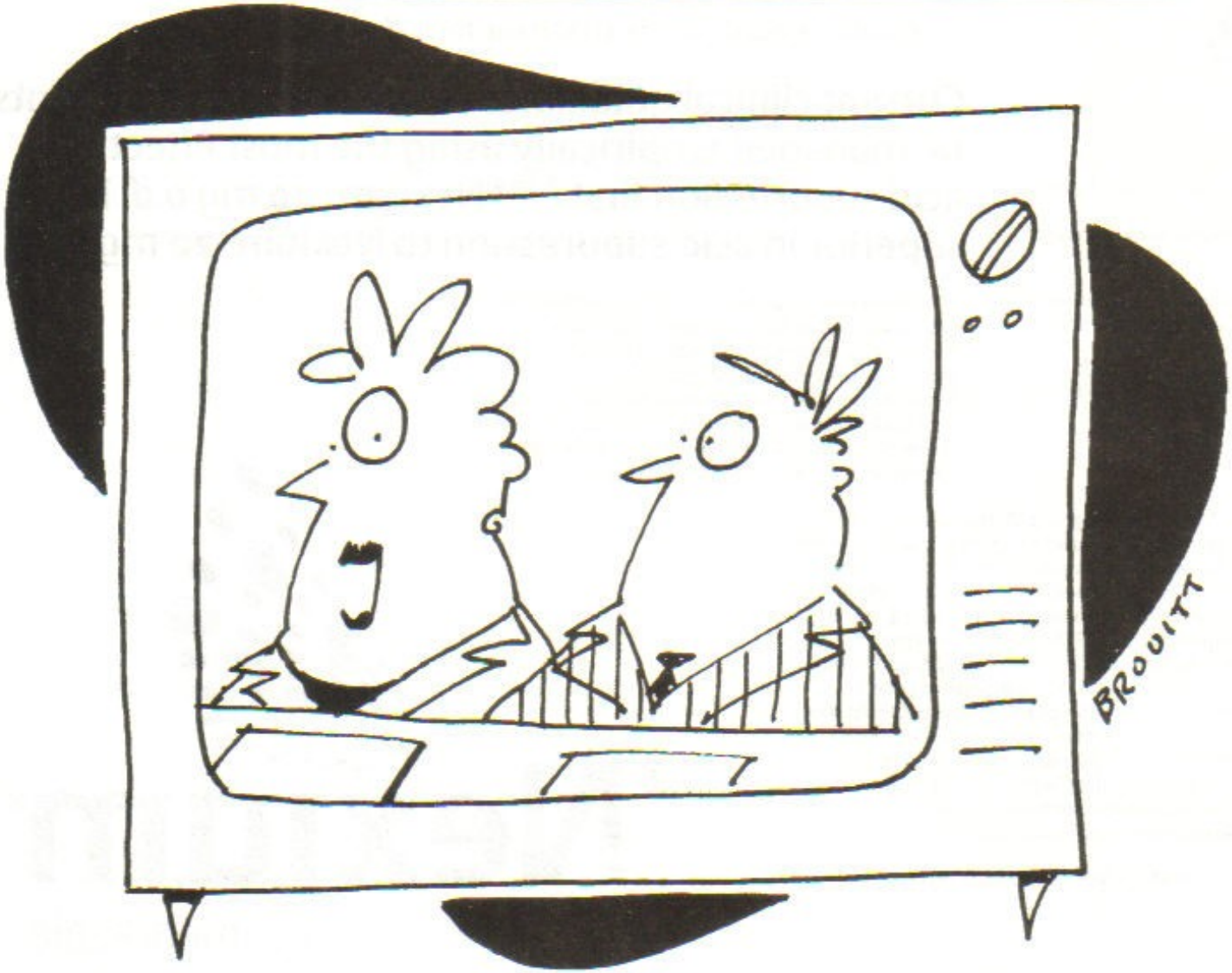
Disclosures

No conflicts of interest

Learning objectives

1. Explain the benefits of geriatric assessment in older adults with cancer
2. Describe the goals and structure of the Older Adults with Cancer Clinic (OACC)
3. Describe the lessons learned in the first four years of OACC



"And now over to one of our so-called 'experts.'"

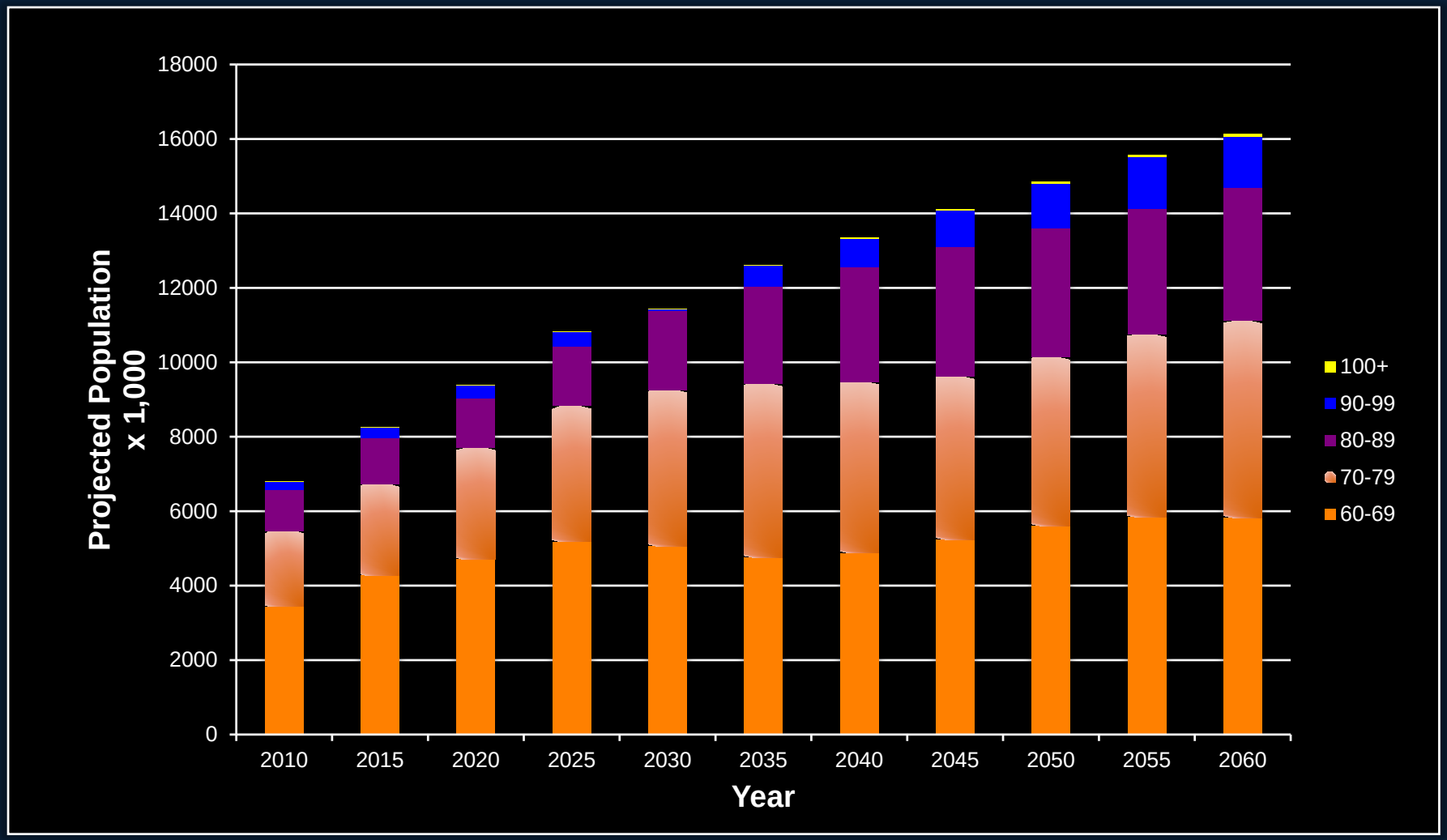
Outline

- Demographic preliminaries
- Benefits of geriatric assessment
- Older Adults with Cancer Clinic – goals and structure
- Lessons learned

Outline

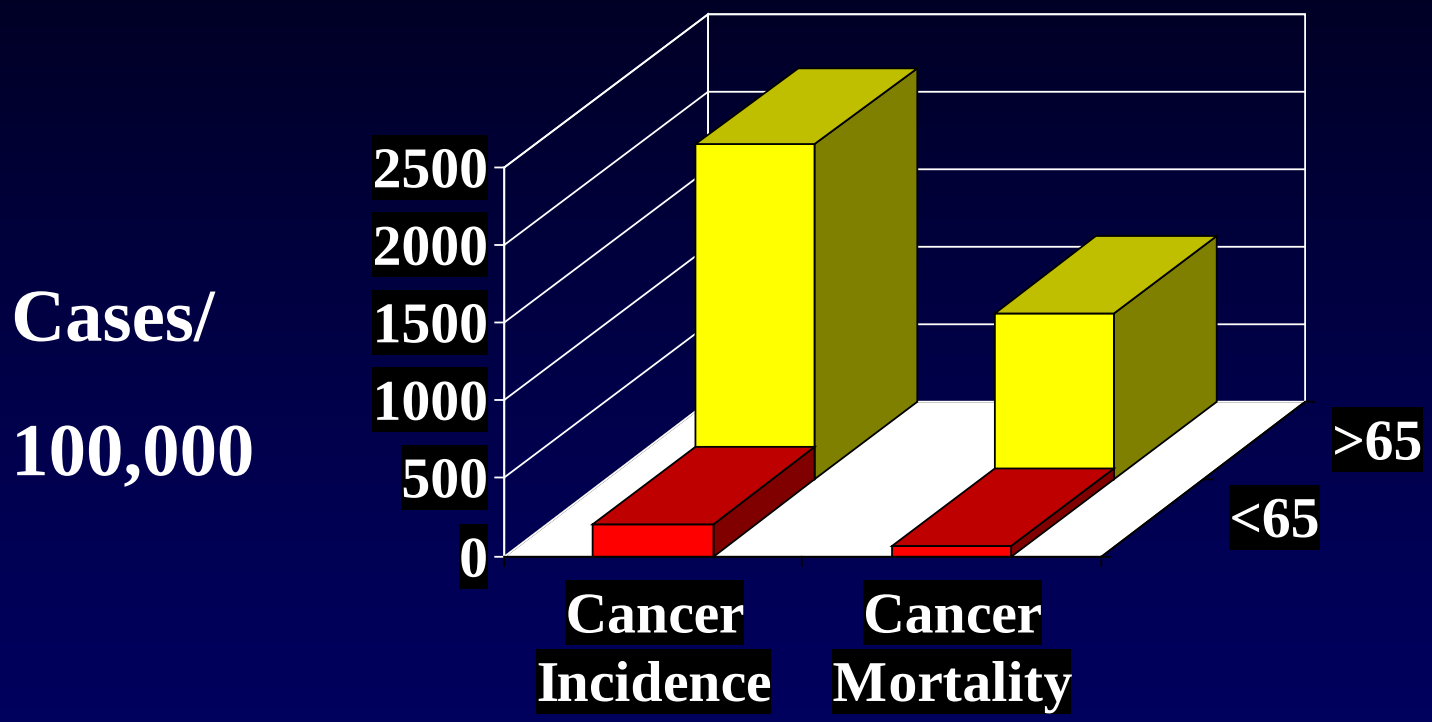
- **Demographic preliminaries**

The Population is Aging



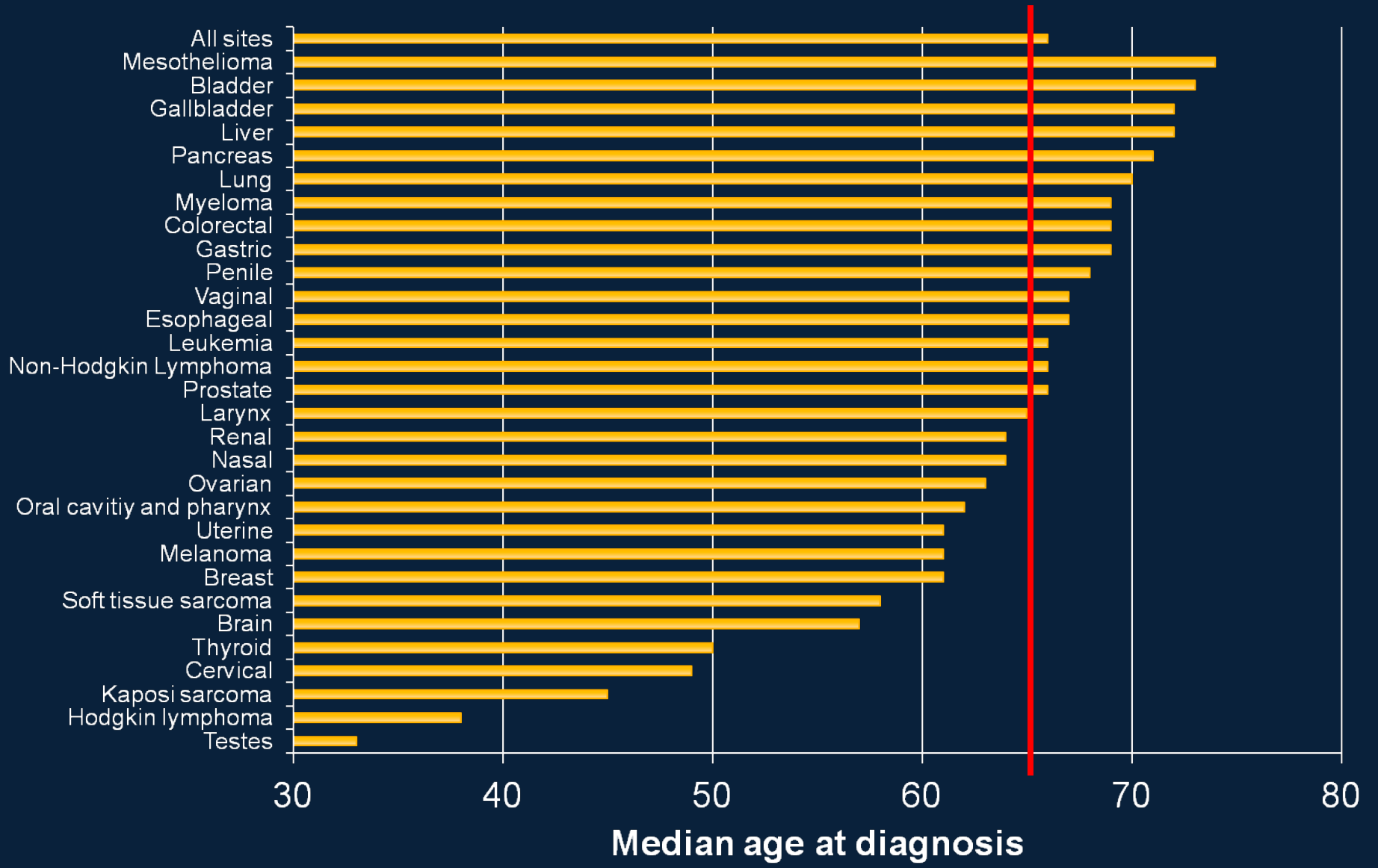
Statistics Canada, 2010

Cancer and Aging



Yancik R, Int'l Society of Geriatric Oncology 2001

We Are All Geriatric Oncologists



SEER Cancer Statistics Review 1975-2010
http://seer.cancer.gov/csr/1975_2010/browse_csr.php?section=1&page=sect_01_table.12.html

Outline

- Demographic preliminaries
- **Benefits of geriatric assessment**

Comprehensive geriatric assessment

"A multidisciplinary diagnostic process intended to determine a frail elderly person's medical, psychosocial, and functional capabilities and limitations in order to develop an overall plan for treatment and long-term follow-up"

Rubenstein L, 1982

THEORETICAL Benefits of CGA in Oncology

1. Detect relevant conditions/issues
2. Better prognosticate
3. Better predict treatment toxicity
4. Reduce over/under-treatment
5. Reduce treatment toxicity

CGA identifies things oncologists do not

- 7 studies of geriatric oncology population:
  - 14-69% dependent in one or more basic ADL's
  - 48-74% dependent in one or more instrumental ADL's
  - 14-40% had significant depressive symptoms
  - 25-51% had cognitive impairment
  - Taking a mean of 6 medications

Extermann M. *J Clin Oncol* 2007; 25:1824

GA and mortality

- 11 studies (n=37 to 660)
- In 8 of 11 studies GA factors associated with mortality:
  - older age
  - inadequate finances
  - poor mental health
  - comorbidity
  - high medication use
  - high GFI scores (frailty)
  - low MNA scores (nutrition)
  - mild ADL impairments

Puts M. *JNCI* 2012; 104:1134
Puts M. *Ann Oncol* 2014; 25:307

GA and treatment complications

- 13 studies (12 in chemo setting)
- Complications were generally defined as grade 3 or 4 toxicity, treatment interruptions, and postoperative complications such as wound infections.
- 8 studies showed increased toxicity with:
  - ADL impairments
  - IADL impairments
  - comorbidity
  - poor mental health/cognitive functioning
  - poor social support

GA and treatment complications

- 2 well-validated chemotherapy toxicity prediction tools (Cancer and Aging Research Group (CARG) tool (Hurria *J Clin Oncol* 2011; 29:3457) and Chemotherapy Risk-Assessment Scale for High-age patients (CRASH) (Extermann *Cancer* 2012; 118:3377)
- Both studied in over 500 patients undergoing a variety of systemic treatments for solid tumours
- Predicted severe toxicity incorporating clinical and geriatric variables with moderate accuracy (C-statistic 0.72-0.74)

GA and treatment plan

- Systematic review of 10 studies examining impact of CGA on subsequent treatment plan (Hamaker M et al. *Acta Oncologica* 2014; 53:289)
- Initial treatment plan made by primary oncologist or MDT
- CGA done by clinician(s) and results fed back usually to primary oncologist or MDT

- **Median of 39% of initial treatment plans modified by CGA**
  - In 2/3 of cases led to less intensive treatment

- Update (*J Geriatr Oncol* 2018; 9:430) – 28% of treatments modified

CGA and treatment toxicity

- 1 before-after study (Kalsi et al. *Br J Cancer* 2015; 112:1435) showed improved treatment completion (p=0.006) and 9% reduced toxicity (p=0.29)
- 3 small phase 2 RCTs completed – mixed signals
- Corre et al. *J Clin Oncol* 2016; 34:1476– phase III RCT demonstrated less toxicity with no reduction in survival in advanced lung cancer if treatment plan guided by GA
- At least 6 large RCTs underway (including 5C – Canadian multicentre trial funded by CCSRI) with toxicity as a primary or secondary endpoint

CGA in Oncology – Summary of Evidence

1. Detect relevant conditions/issues 
2. Better prognosticate 
3. Better predict treatment toxicity 
4. Reduce over/under-treatment 
5. Reduce treatment toxicity 

Outline

- Demographic preliminaries
- Benefits of geriatric assessment
- **Older Adults with Cancer Clinic – goals and structure**

What I we do in clinic and why

- Our GA is done by a clinical nurse specialist in geriatric oncology and a geriatric medicine specialist with an interest in oncology (MD even more scarce than RN)
- Telephone intake by RN where possible
- Structured assessments
- Dedicated social work support as needed and links to hospital/community resources
- 2 half-days per week, see 3 new pts per clinic and 1-3 follow-ups

What I we do in clinic and why

- No systematic screening for geriatric issues/frailty in oncology clinics
- Referrals are based on clinician concern
- New consults require 30-45 min nursing time and 30-45 min physician time

What I we do in clinic and why

- Step 1 – clarify the question/triage the patient
- Step 2 – data gathering
- Step 3 – validated prognostic tools
- Step 4 - domain-specific summary and recommendations
- Step 5 – implement GA-based plan
- Step 6 – follow up as needed

What I we do in clinic and why

Step 1 – clarify the question/triage the patient

- Reasons for referral
  - Pretreatment
  - On active treatment
  - Post treatment survivorship phase with geriatric issues

- For pretreatment and active treatment patients, make sure you understand the proposed/current treatment plan

What I we do in clinic and why

Step 2 – data gathering (8 domains)

- Comorbidity – past medical history & Charlson Index
- Medication review
- Functional history – OARS IADL scale (Katz basic ADL scale)
- Falls risk – single question plus mobility measures
- Social supports – living situation, family, public/private support, financial difficulties, will, POA
- Nutrition – weight loss, current BMI

What I we do in clinic and why

Step 2 – data gathering (8 domains)

- Mood – PHQ-9
- Cognition – Mini-Cog (3 item recall plus clock drawing)

- Physical Performance Measures
  - Grip strength
  - Short Physical Performance Battery
- Vision and hearing single-item screens
- Symptoms – pain/fatigue/sleep/bowel/bladder

JOURNAL OF CLINICAL ONCOLOGY

ASCO SPECIAL ARTICLE

Practical Assessment and Management of Vulnerabilities in Older Patients Receiving Chemotherapy: ASCO Guideline for Geriatric Oncology

Supriya G. Mohile, William Dale, Mark R. Somerfield, Mara A. Schonberg, Cynthia M. Boyd, Peggy S. Burhenn, Beverly Canin, Harvey Jay Cohen, Holly M. Holmes, Judith O. Hopkins, Michelle C. Janelsins, Alok A. Khorana, Heidi D. Klepin, Stuart M. Lichtman, Karen M. Mustian, William P. Tew, and Arti Hurria

- Table 2 in ASCO guideline on GA (epub May 21st) summarizes their recommended tools and alternatives

What I we do in clinic and why

Step 3 – validated prognostic tools

- As appropriate:

- Remaining life expectancy – ePrognosis site (Lee/Schonberg Indices)
- Chemotherapy toxicity risk – CARG
- Surgical risk – ACS NSQIP

What I we do in clinic and why

Step 4 - domain-specific summary and recommendations

"In summary, Mr. Z is a delightful and fairly fit 82-year-old man with DISEASE. Based on the comprehensive geriatric assessment, his domain-specific assessment is as follows:

Comorbidities – LOW/MODERATE/HIGH

Function – INDEPENDENT/DEPENDENT, NORMAL/DECREASED PHYSICAL PERFORMANCE

Medication Optimization – NO ISSUES/POTENTIAL FOR OPTMIZATION

Falls Risk – INCREASED/NOT INCREASED

Social Supports – NONE/VULNERABLE/GOOD

Nutrition – MALNOURISHED/AT RISK/NORMAL

Mood – DEPRESSED/NORMAL

Cognition – NORMAL/ABNORMAL/BORDERLINE"

What I we do in clinic and why

Step 4 - domain-specific summary and recommendations

- Recommendations are broken down into cancer treatment decision-making and other individual issues identified in CGA
- Around proposed cancer treatment:
  - Fit for proposed treatment
  - Could tolerate aggressive therapy
  - Consider up-front dose reduction and/or reduced treatment intensity
  - More appropriate for best supportive care

What I we do in clinic and why

Why 8 domains?

- Comorbidity
  - Increased periop morbidity and mortality
  - Increased chemo toxicity
  - Increased competing risks of mortality in curative/adjuvant setting
- Function
  - Increased chemo toxicity
  - Reduced adherence, transportation/home support issues

What I we do in clinic and why

Why 8 domains?

- Medication Optimization
  - Increased risks of drug interactions
  - Increased chemo toxicity (e.g. dehydration and orthostatic hypotension)
  - Symptom management (e.g. pain, constipation)
- Falls Risk
  - May affect choice of chemo (e.g. CIPN)
  - Bone health issues, bleeding risk

What I we do in clinic and why

Why 8 domains?

- Social supports
  - Increased chemo toxicity
  - Increased ER use
  - Decreased treatment adherence
- Nutrition
  - Increased chemo toxicity
  - Worse recovery post-op

What I we do in clinic and why

Why 8 domains?

- Cognition
  - Safety around side effect monitoring
  - Increased chemo toxicity, delirium risk post-op
  - Consent issues, treatment goals
- Mood
  - Increased chemo toxicity
  - Decreased treatment adherence

What I we do in clinic and why

Step 5 – implement GA-based plan

• as much as possible we try to implement non-oncologic recommendations with patient/family to reduce burden on oncology clinics and facilitate collaborative care

• referral for physio, occupational therapy, dietitian, social work

• medication changes for comorbidity management and/or symptom control

• referrals to community agencies

• basic investigations including lab tests, imaging

What I we do in clinic and why

Step 6 – follow up as needed

- Pre-treatment patients seen once after 2 cycles of chemo or 4-6 weeks after surgery or radiation to ensure no other geriatric issues requiring ongoing input
- Follow-up otherwise as clinically indicated but limited due to capacity and prioritization

Outline

- Demographic preliminaries
- Benefits of geriatric assessment
- Older Adults with Cancer Clinic – goals and structure
- **Lessons learned**


IF YOU DON'T SEE WHAT YOU WANT... MAYBE YOU WANT THE WRONG THINGS

Outline: Lessons learned

1. **Make a compelling case**
2. Collect local data
3. Appeal to the best
4. Have friends in high places
5. Know what they want
6. Patience is a virtue
7. It’s not quite research
8. Under promise, over deliver
9. Maintain a (prospective) database
10. Make it academic
11. It takes a village

UHN Princess Margaret Cancer Centre

World Class
Personalized Cancer Medicine

The Princess Margaret
Cancer Centre

Transform Patient Care

Augment Correlative Cancer Biology

Accelerate Guided Therapeutics

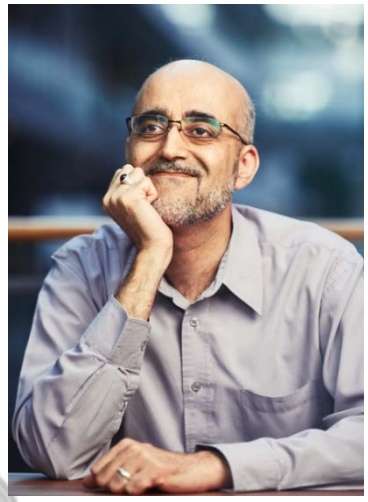
Expand Novel Therapeutics

Drive Outreach and Education

Essential Priorities

Geriatric Oncology: Demonstration Project

Invited guest speaker for Medical Grand Rounds: Dr. William Dale (U. Chicago)



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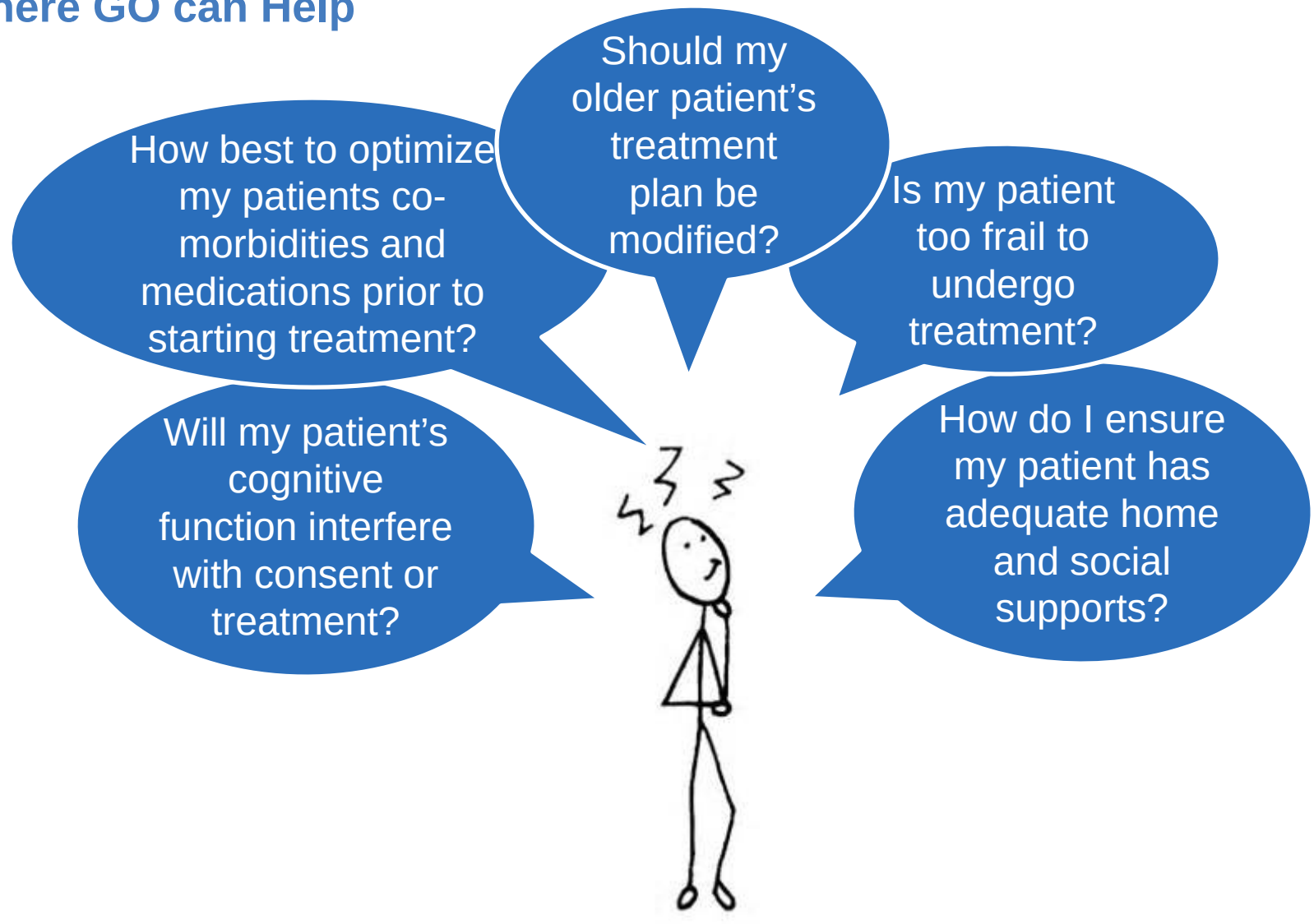
Current State
Princess Margaret Cancer Centre

- Approx. 45% of new patients are over 65
- Approx. 15% of new patients are over 75
- Currently no established screening and referral system for geriatric patients
- 2010 pilot study done at PM
  - Drs. Horgan and Alibhai
  - ***Findings: Geriatric Oncology clinicians may provide significant value in advising the primary oncology team in treatment decisions for complex patients***
  - ***Limitations: No screening, 1 time assessment only***
- Early Involvement around Geriatric Oncology (GO) – views of GU Champions
  - Identified many potential patients who would benefit
  - Established that pre-treatment and during treatment interactions with GO Support will be most helpful
  - Prioritized screening and local empowerment to tackle geriatric issues will best support patients

Where GO can Help



Outline: Lessons learned

- **Collect local data**
  - Local stats
  - Feasibility data
  - Initial ‘impact’ data

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- Top 5
- Major US centres have geriatric oncology clinics
- Even Montreal has one!

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Have friends in high places

- Started in genitourinary (GU) site
- Met with GU site group lead
- Met with representatives from rad onc, med onc, and surgical oncology in GU and across all of PMH
- Met also with nursing and psychosocial oncology

- Biggest boost came from Dr. Mary Gospodarowicz, VP Cancer Program

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Know what they want

- Established committee of champions from med onc, rad onc, and surg onc (main referrers)
- Reviewed potential benefits of geriatric oncology
- Asked them how we could help them
- Tailored clinic processes and communications (e.g. clinic note structure, same day email summaries)

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Patience is a virtue

- Between the pilot clinic and full clinic was 5 years, many meetings, and multiple presentations

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It’s not quite research

	Research	Program Dev
• Write a proposal	X	X
• Develop goals and timelines	X	X
• Make a budget	X	X
• Hire people		X
X		
• Track expenses	X	X
• Collect outcomes	X	X
• Cherry pick data and stats	X	X

Goals and Deliverables

Phase 1 (1 year)

Goals

- Initiate Geriatric Oncology Clinic
- Design screening and refine referral criteria
- Build Capacity

Deliverables

1. Geriatric Oncology (GO) Clinic
   - ✓ Recruit, hire, and train staff
   - ✓ Initiate clinic with referrals from GU
2. Screening
   - ✓ Complete a detailed environmental scan of peer organizations to inform screening
   - ✓ Develop referral criteria for GO clinic
   - ✓ Design the screening process and finalize tools with the goal of integrating with DART
   - ✓ Implement screening in GU
3. Build Capacity
   - ✓ Design and deliver education modules
   - ✓ Evaluate education modules
4. Needs Assessment
   - ✓ Complete needs assessments by site (GU + 2 others)

Phase 2 (1 year)

Goals

- Broader clinic and screening implementation
- Build Capacity

Deliverables

1. Geriatric Oncology (GO) Clinic
   - ✓ Expand clinic to two additional sites incorporating lessons learned from GU
2. Screening
   - ✓ Implementation of systematic screening in two additional sites
   - ✓ Synthesize lessons learned and recommendations for broad roll-out
   - ✓ Evaluate screening process
3. Build Capacity
   - ✓ Deliver education modules to additional sites
   - ✓ Train one fellow in geriatric oncology

Proposed Metrics

Performance Metrics	
Volumes	• 70% of all vulnerable/frail geriatric patients at Princess Margaret (identified during screening, approximately 30-50% of patients age 75+) will be seen in the Geriatric Oncology Clinic (50-100 new consults and 100-150 follow-up visits in first year for GU site) • 80% of patients will be seen within 2-4 weeks of referral • Increase enrolment of vulnerable / frail geriatric GU patients to clinical trials by 10% from baseline
Standard Assessment	• 90% of geriatric oncology patients referred will be assessed with a standardized CGA tool at the initial visit
Patient Satisfaction	• 80% of geriatric oncology patients will report being satisfied or very satisfied with their care experience
Provider Satisfaction	• 80% of providers will be satisfied or very satisfied with their experience interactions with Geriatric Oncology Clinic • Number of knowledge translation sessions completed (attendance) and improvement in knowledge scores pre and post modules
Treatment decision-making	• 25% of referred patients without an established cancer treatment plan will have a treatment plan after the initial visit with the aid of a CGA
Impact on Resources	• Decrease in % of older people admitted after starting a common cancer treatment regimen (e.g. first-line chemo for metastatic prostate cancer) • Increase referrals (CCAC, SW, dietitian, OT) by 50% from baseline overall; most frequent referrals will be to SW, CCAC, and POPC

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Under-promise, over deliver

- Start small
- Modest goals (volumes, wait times, outcomes)
- Do it carefully, do it well

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Maintain a (prospective) database

- Crucial to capturing stats for clinical/reporting, quality improvement, and research purposes
- We started out with Excel and Word documents – disastrous
- Moved over to customized Access database – a HUGE boon
- Equally important I don’t enter most of the data – my nurses do
- Students help us conduct quality checks
- Can translate into academic outputs…

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Make it academic

- My BOSSES like academic outputs, not just providing a great service
- Clinic is a springboard for recruitment onto clinical trials and studies

- 10 posters at national and int'l meetings
- 3 oral presentations at int'l meetings
- 2 manuscripts published, 2 in preparation

(Helps to be in a young niche area…)

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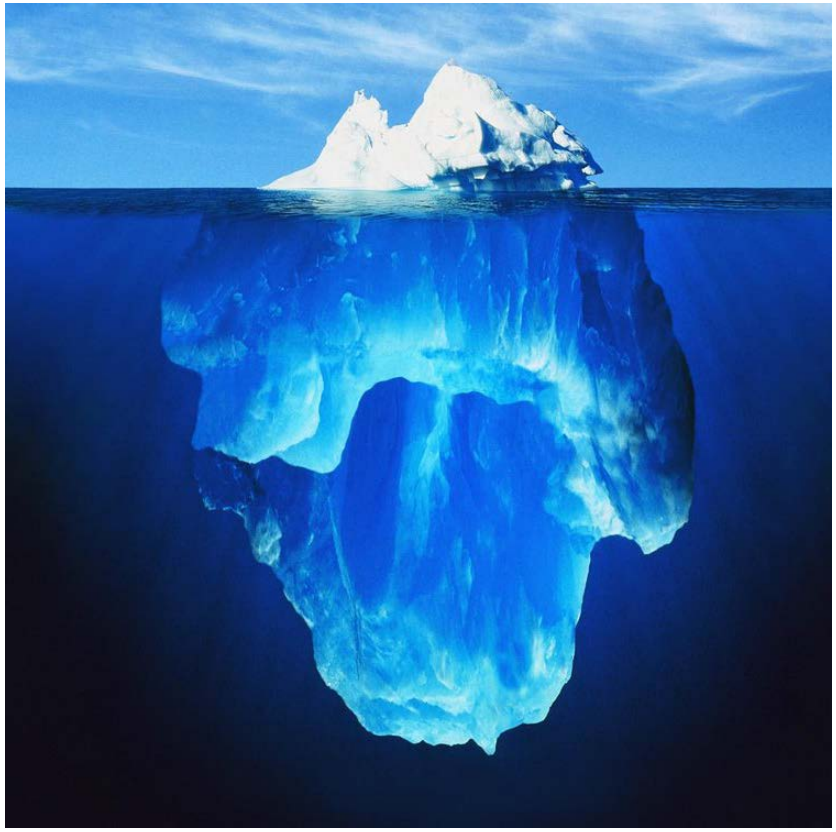
It takes a village

- Nurses
- Administrators
- Division/department heads
- Fellow geriatricians
- Trainees
- Social workers
- Dietitians
- Pharmacists
- Smart undergrad students who can design relational databases
- Oncology champions
- Governance committee

"Wind up your presentation — he's losing bone mass."

The future has its challenges

- Patient volumes vs clinical resources
- Lack of permanent funding
- Finding, funding, and training future ‘geriatric oncologists’
- Changing practices of (‘geriatricizing’) frontline oncology teams

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