

### **Conflict Disclosure Information:**

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Title of Presentation: Evaluation of Three Geriatric Screening Tools in an Oncological Setting

I have no financial or personal relationships to disclose

### Geriatric Screening Tools in an Oncological Setting

Including G8, ePrognosis, and CRASH

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# Geriatric Assessment (GA)

### Description

 Process that determines medical, psychological, and functional capabilities of elders

### **Applications**

- Good predictor of overall survival
- Predict harms and benefits of oncological intervention to help make decisions

### Limitations

- Time consuming
- Not required for every patient

# Comprehensive Geriatric Assessment (CGA)

- Social data: age, sex, living situation, marital status, educational level
- Functional status
  - Katz's activities of daily living (ADL)
  - Lawton's instrumental activities of daily living (IADL)
- Fall history during previous 12 months
- Self-perceived fatigue, cognitive status, mood, nutritional status, and comorbidity
- Classic oncologic parameters
  - Eastern Cooperate Oncology Group performance status
  - Tumor characteristics
  - Treatment Details

# Screening Tools

- Screening tools help to avoid the efforts of using GA on fit older patients who do not need extensive GA
- Tools can help physicians with the decision-making process when considering cancer screening or cancer treatment
- G8, ePrognosis, and CRASH









# **G8 Screening Tool**

### Description

- 8-item index that adds up to a total score from 0 (poor) to 17 (good)
- Score of ≤14 indicating a geriatric risk profile

#### Study

- Kenis et al., 2013
- 811 patients from Belgium
- ≥70 year olds with a malignant tumor
- CGA and G8 tool were performed for each patient

#### Method

- Functional decline and overall survival (OS) of patients was observed
- Results from G8
   were compared
   with results from
   CGA (considered
   Gold-Standard) on
   how well it
   predicted the
   decline and OS

### Evaluation

- Compared with Gold standard (CGA)
  - 86.5% Sensitivity
  - 59.3% Specificity
- Compared with Functional decline (ADL)
  - 84.2% Sensitivity
  - 31.3% Specificity
- High inclusion rate therefore implementation is feasible
- "Geriatric risk profile" indicated by G8 shown to correlate strongly with OS and functional decline

# ePrognosis

### Description

- Website including over 10 indices that predict mortality risk
- AND
- Cancer screening app that weighs benefits and harms of screening (breast and colorectal)

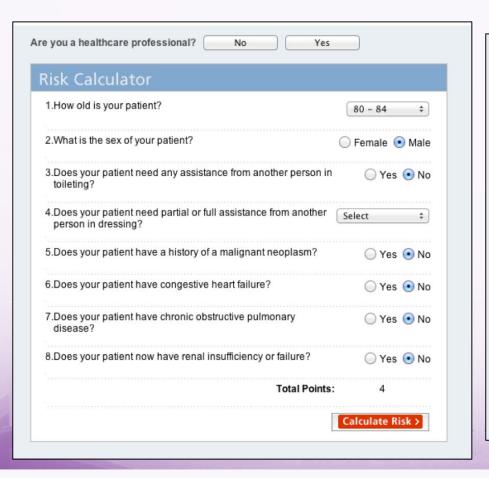
### Using ePrognosis

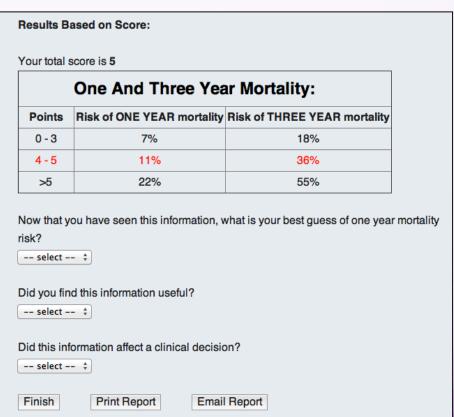
 Both the indices and the app ask series of 10-15 questions regarding health status

### Results

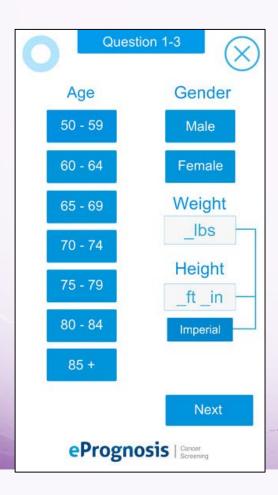
- Website will give a mortality rate for given length of time (1 year, 5 year, etc.)
- App will give a suggestion on whether cancer screening is beneficial or not

## **General Website**

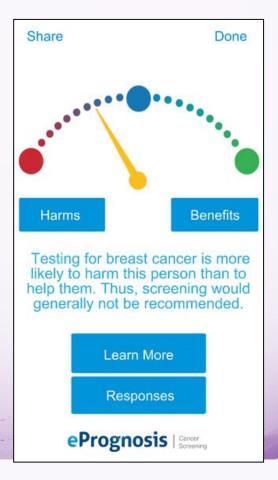




# Cancer App







### **Evaluation**

- Indexes are easy to use and required information can be obtained easily
- Limited to breast and colorectal cancer
- Mortality risk and/or cancer screening suggestion can be used to aid physicians in making treatment decisions
- Physicians must still use their own judgment in applying results

### Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH)

### Description

- Instrument that provides risk score for hematologic and nonhematologic chemo toxicity
- Combines

   average toxicity
   of a chemo
   regimen and
   individual patient
   variables

#### Method

- Patients aged ≥70 yrs in 7 Florida hospitals
- Endpoint was chosen to determine when toxicity had been reached
- 24 variables were observed in each of the patients

### Analysis

 Data from the variables was plotted against chemotherapy toxicity to see which ones correlated the strongest

### Results

- Best performing model for H toxicity
  - Diastolic blood pressure
  - LDH (lactate dehydrogenase)
  - IADL (instrumental activities of daily living)
  - Chemotox
- Best performing model for NH toxicity
  - Eastern Cooperative Oncology Group performance status (ECOG PS)
  - Mini-mental health status (MMS)
  - Mini-nutritional assessment (MNA)
  - Chemotox

#### Non-Hematologic Risk Factors

ECOG PS	
0	0
1-2	1
3-4	2
MMS	
<30	2
30	0
MNA	
<28	2
Ohterwise	0

### Discussion

- CRASH score can divide patients into 4 risk categories (low, medium-low, medium-high, and high)
- CRASH score provides integrated risk score that was stable for 2 validations
- Similar to G8 tool

# Summary & Questions

#### G8

- 8-item index that identifies a geriatric risk profile
- Identifies patients who need more extensive GA
- Takes ~5-10 minutes

#### ePrognosis

- Website including over 10 indexes that predict mortality risk
- AND
- Cancer screening app that weighs benefits and harms of screening
- Less ~5 minutes

#### **CRASH** score

- Only tool that combines average chemo toxicity with individual variables
- Requires timeconsuming laboratory tests, but outputs specific risk score
- ~10-20 minutes

### Variables Tested

### Clinical Variables

- Age
- Sex
- BMI
- Diastolic blood pressure
- Comorbidity
- Polypharmacy

#### Laboratory Variables

- WBC count
- Lymphocyte count
- Hemoglobin
- Aspatrate aminotransferase
- Creatinine clearance

### Geriatric and Functional Assessment Variables

- ECOG performance status
- IADL (Istrumental Activities of daily living)
- MNA (Mini-Nutritional Assessment)
- MMS (Mini-mental status
- GDS (Geriatric Depression Scale)

#### Cancerspecific variables

- Disease Stage
- Bone Marrow Invasion
- Prior Chemotherapy
- Response

<sup>\*</sup>Tumor type not selected as a variable