

# CAN THE ANAESTHETIST AND GERIATRICIAN WORK TOGETHER?

## AN ANAESTHETIST'S PERSPECTIVE.

Dr Sian Davies

Consultant anaesthetist

Royal Derby Hospital

# OBJECTIVES

- Pre-operative assessment
- Risk assessment
- Prehabilitation
- Conduct of anaesthesia

# PRE-OP ASSESSMENT

## AIMS OF THE ANAESTHETIC ASSESSMENT

- To identify any risk factors which could possibly be optimised prior to surgery.
- To try to quantify the risks of surgery so that the patient is able to make an informed decision

# OPTIMISING MEDICAL CONDITIONS

- CVS – hypertension, AS, heart failure, IHD, pacemakers
- RS – asthma/ COPD, OSA, smoking
- Diabetes mellitus (NICE HbA1C < 69)
- Physical activity – prehabilitation
- Nutrition

# ANAESTHETIC ASSESSMENT

- physiological state (especially cardiac and respiratory) is more important than age.
- Frailty is an important risk factor.
- cardiac function can often worsen after chemotherapy
- surgical risk prediction scores to give % **mortality and morbidity**. Morbidity can adversely affect quality of life (QoL) post-op and delay recovery.
- Elderly patients are at risk of post-op delirium



# FRAILTY SCORE

- Frailty is defined as “ ***a multisystem loss of physiological reserve that makes a person more vulnerable to disability during and after stress***”.
- Common in elderly population.
- Frailty score has been shown to be better predictor of post-op outcome than ASA score.
- Increasing frailty scores correlate well with poorer outcomes after surgery.
- Frailty score can be easily calculated using the **modified frailty index** or **Edmonton frail scale**.

## The Edmonton Frail Scale

**NAME :** \_\_\_\_\_

**d.o.b. :** \_\_\_\_\_ **DATE :** \_\_\_\_\_

Frailty domain	Item	0 point	1 point	2 points
Cognition	Please imagine that this pre-drawn circle is a clock. I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten after eleven'	No errors	Minor spacing errors	Other errors
General health status	In the past year, how many times have you been admitted to a hospital?	0	1-2	≥2
	In general, how would you describe your health?	'Excellent', 'Very good', 'Good'	'Fair'	'Poor'
Functional independence	With how many of the following activities do you require help? (meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications)	0-1	2-4	5-8
Social support	When you need help, can you count on someone who is willing and able to meet your needs?	Always	Sometimes	Never
Medication use	Do you use five or more different prescription medications on a regular basis?	No	Yes	
	At times, do you forget to take your prescription medications?	No	Yes	
Nutrition	Have you recently lost weight such that your clothing has become looser?	No	Yes	
Mood	Do you often feel sad or depressed?	No	Yes	
Continence	Do you have a problem with losing control of urine when you don't want to?	No	Yes	
Functional performance	I would like you to sit in this chair with your back and arms resting. Then, when I say 'GO', please stand up and walk at a safe and comfortable pace to the mark on the floor (approximately 3 m away), return to the chair and sit down'	0-10 s	11-20 s	One of : >20 s , or patient unwilling , or requires assistance
Totals	Final score is the sum of column totals			

**Scoring :**

0 - 5 = Not Frail  
 6 - 7 = Vulnerable  
 8 - 9 = Mild Frailty  
 10-11 = Moderate Frailty  
 12-17 = Severe Frailty

**TOTAL**

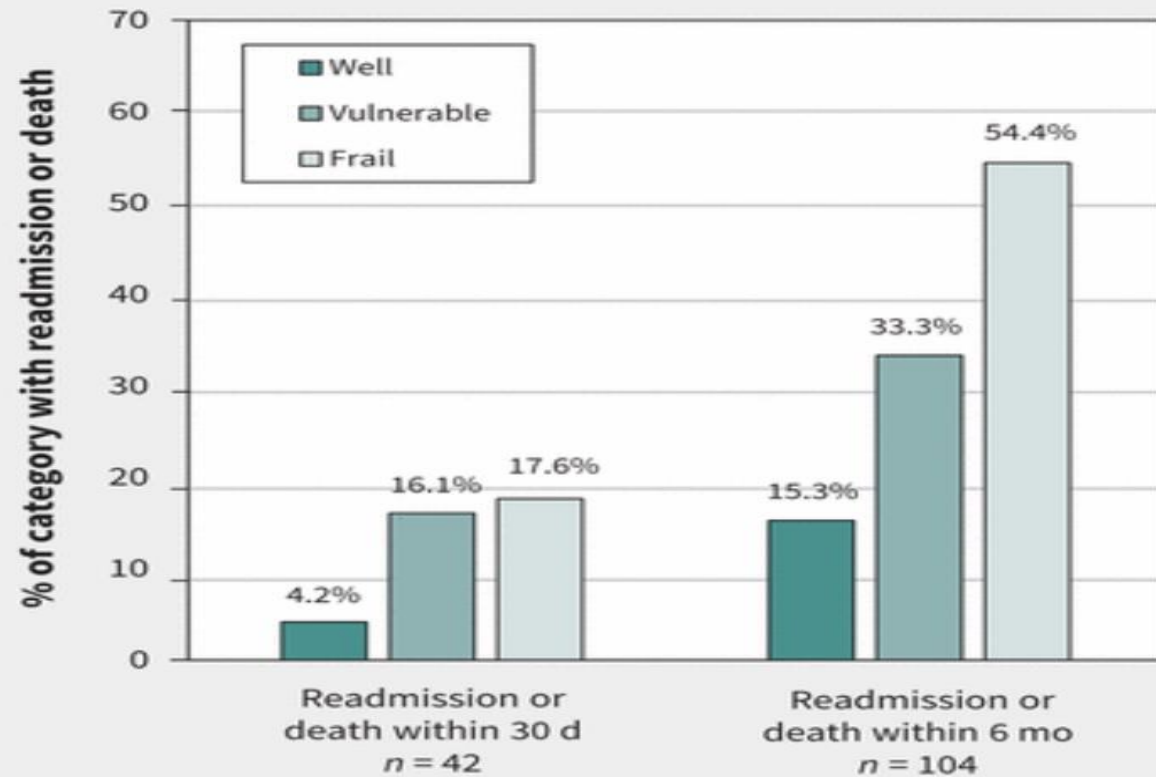
/17
-----

Administered by : \_\_\_\_\_



# IMPACT OF FRAILTY ON OUTCOME AFTER DISCHARGE IN OLDER SURGICAL PATIENTS

CAMJ FEB 20 2018



# ROLE OF FRAILTY IN PREDICTING READMISSION AND FRAILTY IN OLDER ADULTS ADMITTED TO ACUTE CARE WARDS

SCI REP 9 2019 1207

Figure 1

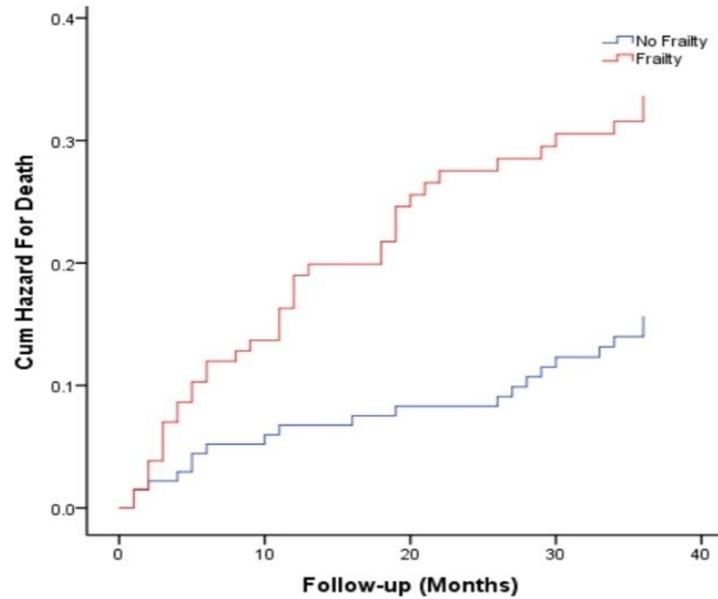
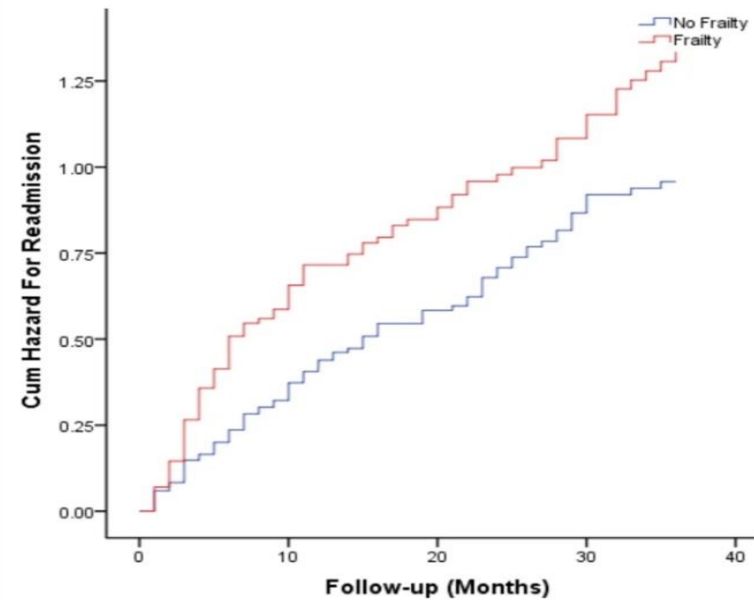
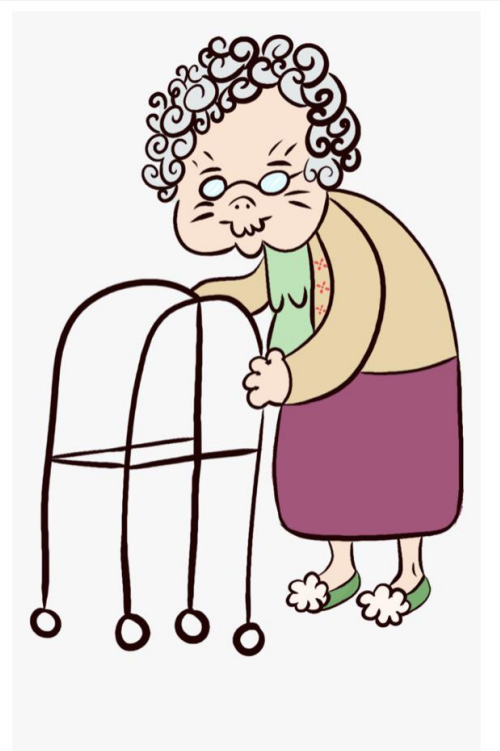


Figure 2



PRIOR TO SURGERY IT IS IMPORTANT TO  
DISCUSS WITH THE PATIENT AND FAMILY  
THE RISKS OF:

- death (%mortality)
- morbidity and decreased QoL post-op
- Surgical risk score – Ppossum, SORT, NSQIP
- Average UK female life expectancy 81.2 years



# ACTUARY TABLE

## AGE/ PROBABILITY OF DYING WITHIN 1 YEAR

75	0.034593
76	0.038235
77	0.042159
78	0.046336
79	0.050917
80	0.056205
81	0.062327
82	0.069190
83	0.076844
84	0.085407
85	0.095010
86	0.105770
87	0.117771
88	0.131063
89	0.145666

# PREHABILITATION

# PREHABILITATION

- ***“enhancing an individuals functional capacity to enable him/her to withstand a forthcoming stressor.”***
- Prehabilitation can
  - decrease LOS
  - decrease post-op complication
  - decrease post-op pain
  - improve fitness
- Good nutrition - 25% decrease complication rate (albumin).
- Smoking cessation for 6-8wks prior to surgery - decrease complication rate from 52-18%
- Improve aerobic fitness



# PREHABILITATION - EXERCISE

Aerobic fitness in elderly population is often poor due to co-morbid disease and sedentary lifestyle.

Strong evidence demonstrating beneficial effects of exercise on improving aerobic fitness in elderly patients - correlates with significant improvement in survival rates in major non-cardiac surgery.

Exercise prehabilitation programmes may improve the risks for elderly patients with breast cancer and should be of 4-8 weeks duration with exercise prescribed for the patients 2-4 times per week (walking/ cycling).



**ANAESTHESIA**



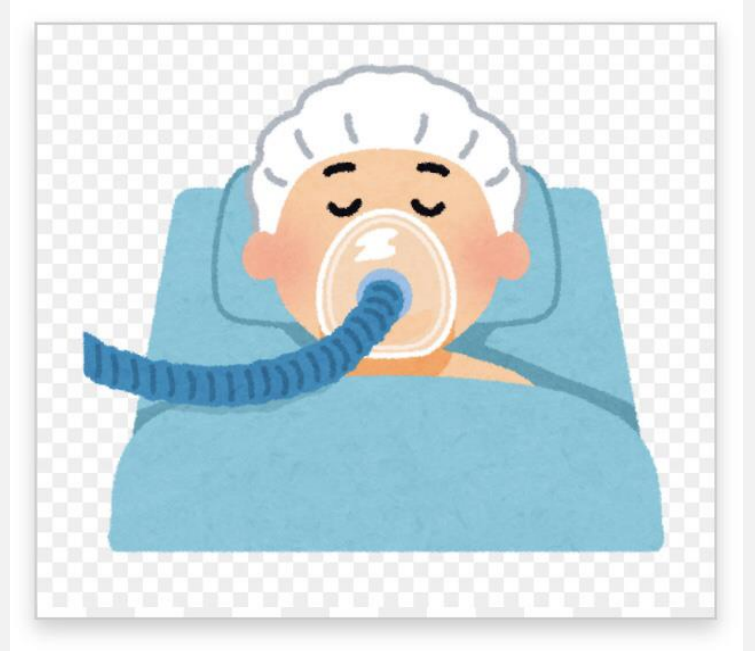
## IN HIGH RISK PATIENTS EXPLORE ALTERNATIVES TO SURGERY UNDER GA

- Primary endocrine therapy
- Excision under local or regional anaesthesia
- Chemotherapy
- Watch and wait
- Consider neo-adjuvant endocrine or chemotherapy whilst medical conditions are optimised.



# IF UNDER GOING SURGERY UNDER GA

- **Give a good normal general anaesthetic**
- **Consider arterial line +/- HDU if significant co-morbidities, especially cardiovascular.**
- **Local anaesthetic infiltration or regional block to reduce opiate use and side effects**
- **Be vigilant for post-op confusion or delirium**



# REGIONAL ANAESTHESIA FOR BREAST SURGERY

- Mastectomy or WLE possible under regional anaesthesia
- Requires **compliant patient, skilled anaesthetist and willing surgeon.**
- Avoids risk of intubation and ventilation and more CVS stable.
- Techniques include thoracic paravertebral block, serratus anterior plane nerve block and pectoralis nerve blocks under ultrasound guidance.
- Time consuming
- Risks – pneumothorax, failure.
- Need plan B



## SUMMARY

- Anaesthetist has a role in identifying and optimising high risk patients prior to breast surgery which should be done in conjunction with a geriatrician.
- It is important to discuss the risks of mortality and morbidity with patients and relatives.
- Prehabilitation can improve physical fitness prior to surgery and could be guided by exercise prescription from a geriatrician, along with dietary and lifestyle modification.
- Consider alternatives to surgery under general anaesthesia.
- As medical professionals we should aim to provide the best quality of life for the longest period of time for patients, in whatever way we can.

## REFERENCES AND USEFUL LINKS

- <https://theanesthesiaconsultant.com/2018/02/04/frailty-and-anesthesia/>
- <https://edmontonfrailscale.org/>
- <https://www.evidencio.com/models/show/1777>
- <https://www.ncepod.org.uk/sort.html>
- <https://riskcalculator.facs.org/RiskCalculator/>
- <http://www.riskprediction.org.uk/index-pp.php>
- <https://www.asra.com/asra-news/article/244/how-i-do-it-regional-anesthesia-for-brea>
- NHS get set 4 surgery - YouTube
- Makary MA et al. Frailty as a predictor of surgical outcomes in older patients. J Am Coll Surg. 2010 Jun.
- Anderson JM. Rehabilitating elderly cardiac patients. West J Med. 1991; 154: 573-578
- Older P, Hall A. Clinical review: how to identify high-risk surgical patients. Crit Care. 2004; 8: 369-372.
- Kothmann et al. Effects of short term exercise training on aerobic fitness in patients with abdominal aortic aneurysms. BJA 103,4. Oct 2009.
- J Durrand. Fit to fight; prehabilitation for major surgery. Clinical Med. 2019.