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Healthy Lifespan
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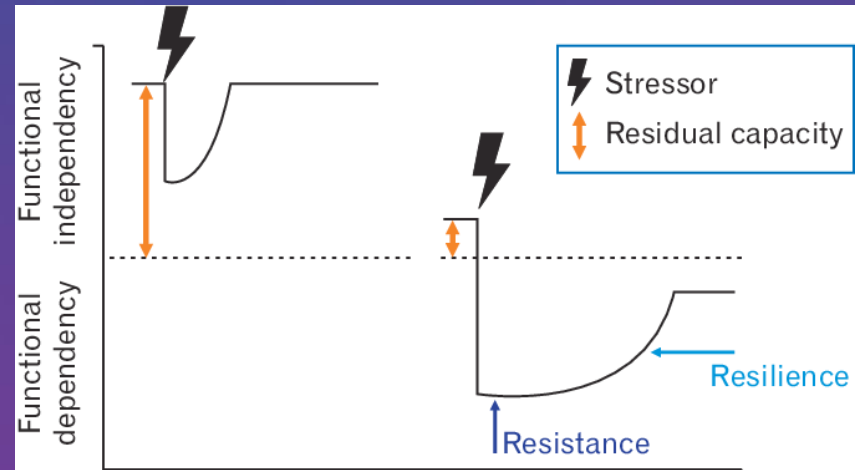
Degree of Frailty Impacts Treatment and Outcomes of Breast Cancer

Olivia Turner



Breast cancer and Frailty

- Age is a risk factor for breast cancer
- Under-representation in research makes treatment recommendation challenging
- Frailty affects up to 50% of those aged 85+
- Decline in physiological reserve with reduced resilience to stressors
- Frailty may impact outcomes
- Develop interventions to treat frailty and increase functional capacity to improve outcomes





Bridging the Age Gap

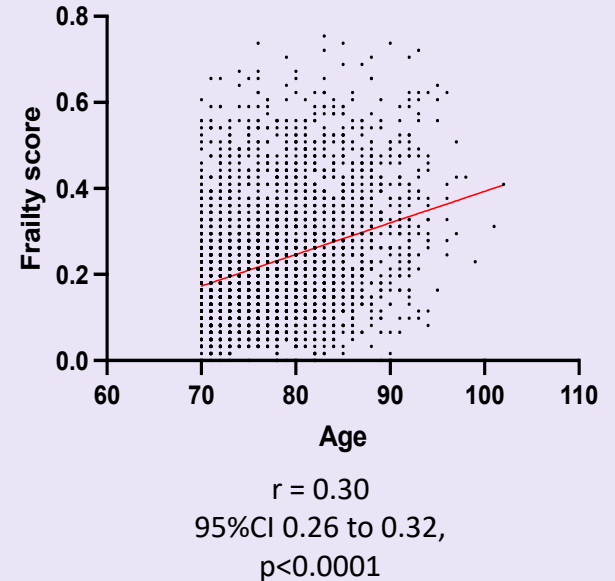
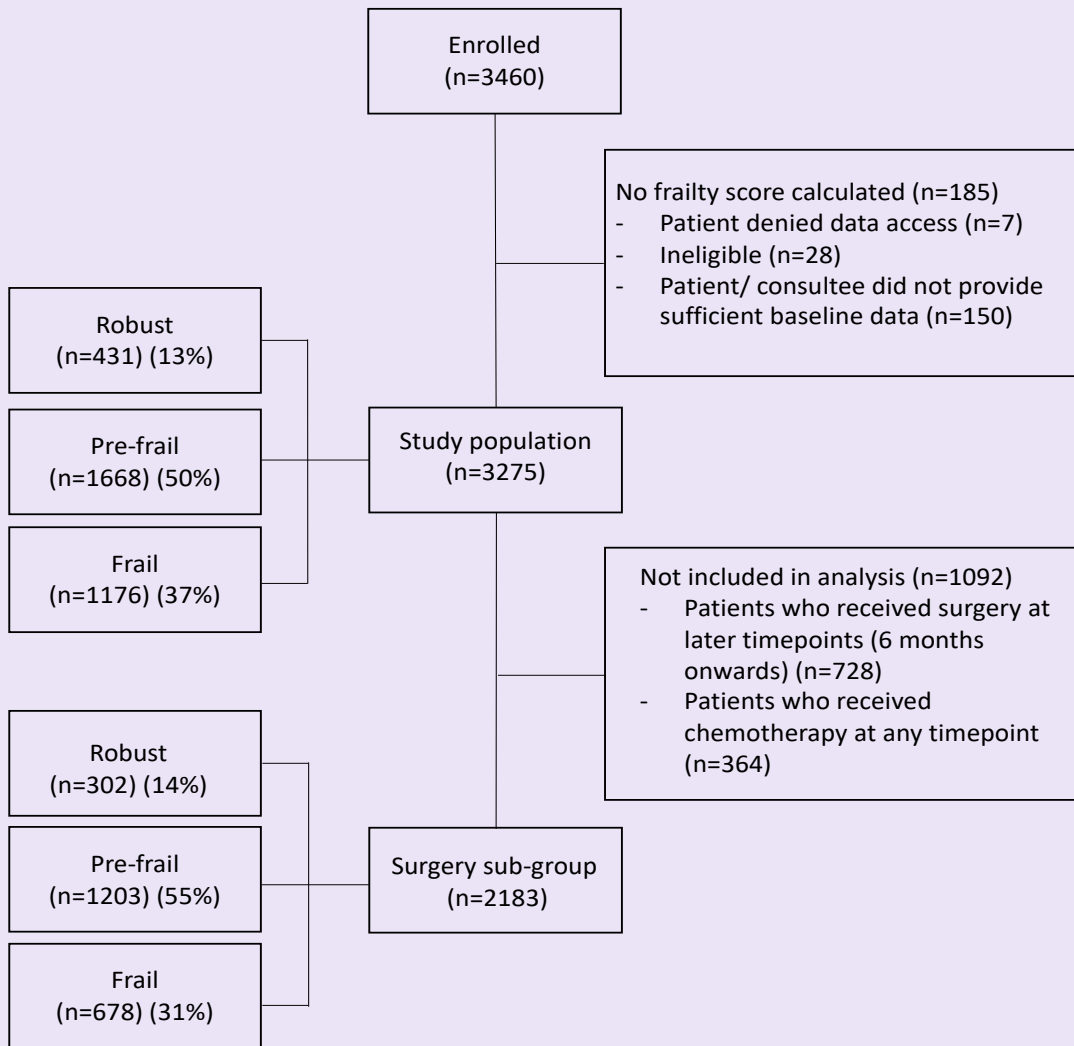
- 3460 women over 70 with breast cancer
- Comprehensive geriatric assessment at baseline
- 6 week, 6 month, 12 month, 18 month and 24 month follow up



Frailty score from comprehensive geriatric assessment



Rockwood's
accumulation of
deficits model



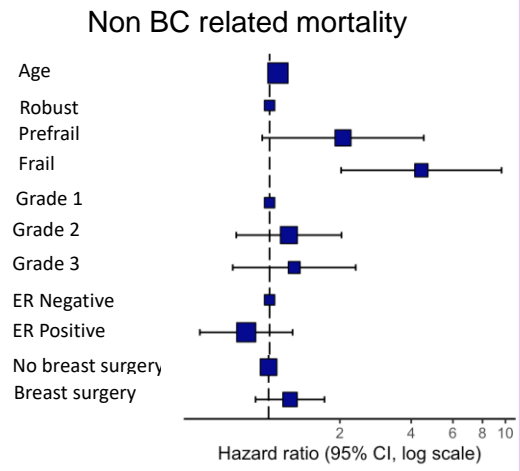
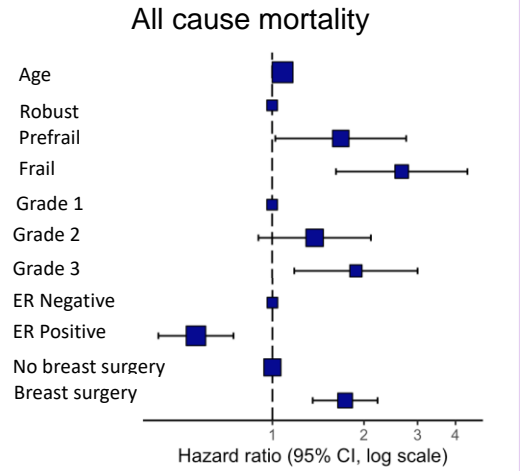
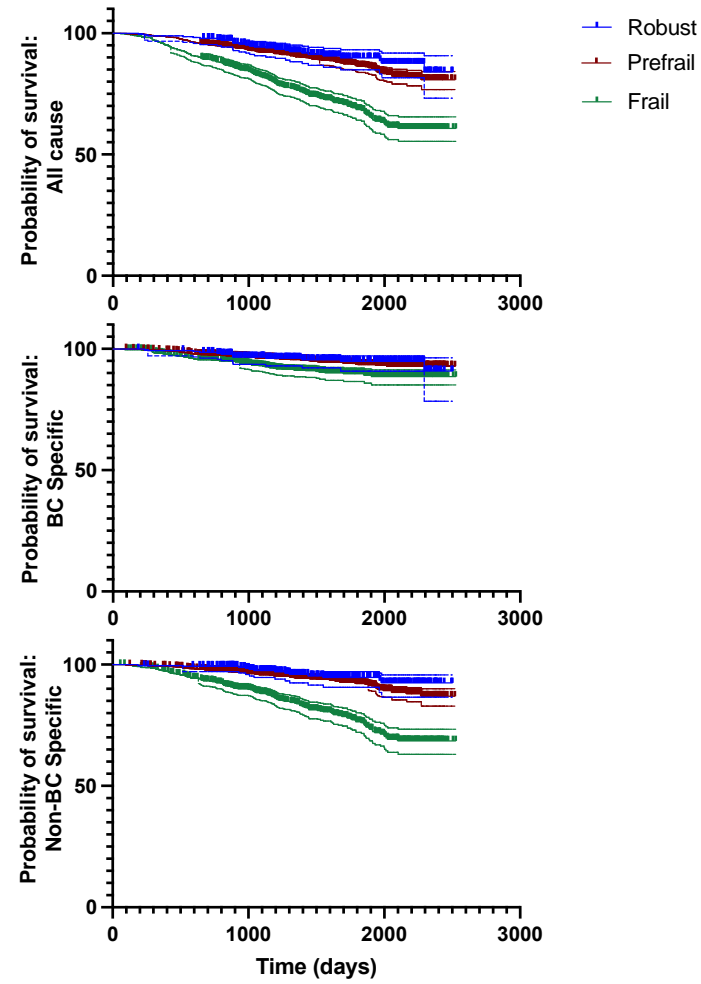


Degree of frailty impacts treatment decisions

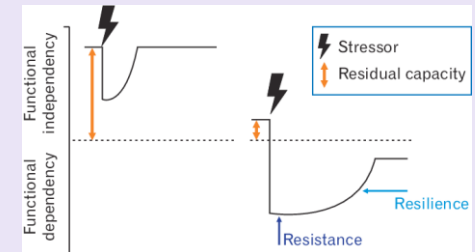
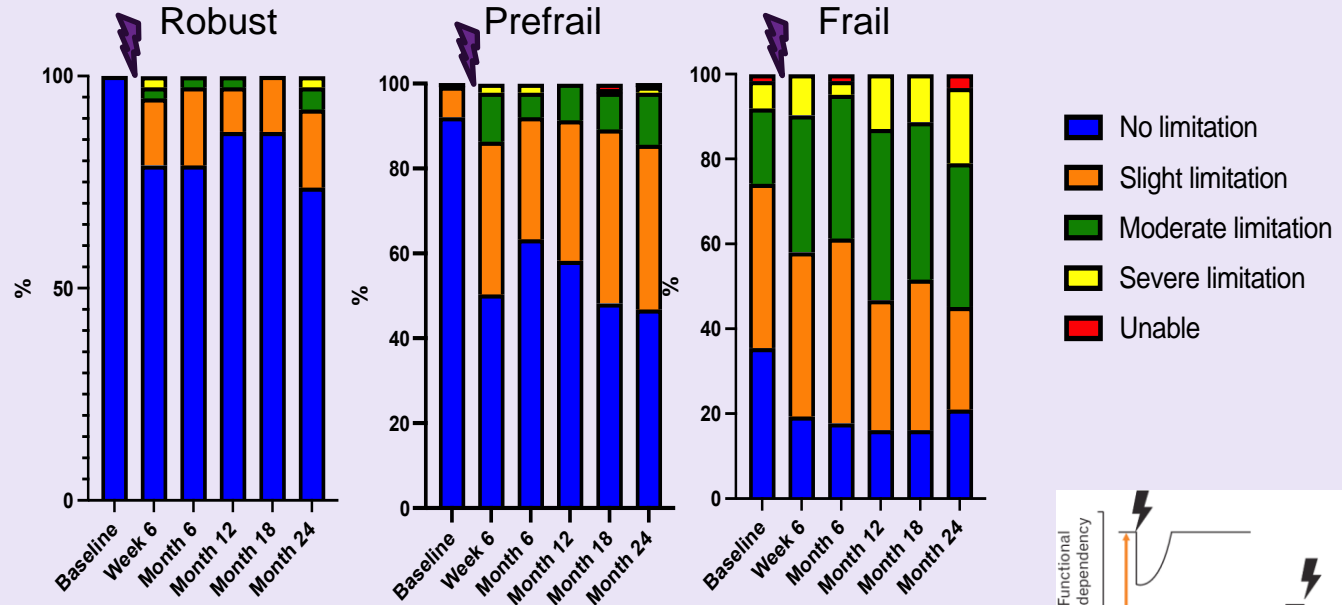
	Robust n = 431	Pre-frail n= 1668	Frail n= 1176	P - value	All n= 3275
Received treatment	426 (98.8%)	1640 (98.3%)	1138 (96.8%)	0.1094	3204 (97.8%)
No treatment	2 (0.1%)	8 (<0.1%)	8 (<0.1%)	-	18 (<0.1%)
Lost to follow-up	3 (0.1%)	20 (<0.1%)	30 (<0.1%)	-	53 (<0.1%)
Surgery	406 (94.2%)	1511 (90.6%)	831 (70.7%)	<0.000 1	2748 (83.9%)
Endocrine therapy	362 (84.0%)	1385 (83.0%)	973 (82.7%)	0.8384	2720 (83.1%)
Radiotherapy	274 (63.6%)	1004 (60.2%)	477 (40.6%)	<0.000 1	1755 (53.6%)
Chemotherapy	86 (20.0%)	238 (14.3%)	98 (8.3%)	<0.000 1	422 (12.9%)

* Unpublished data

Frail patients had poorer survival outcomes than robust patients



Ability to perform daily activities





Conclusions and Future Directions

- The degree of frailty impacts the choice of treatment for early breast cancer
- Frailty also impacts survival and treatment outcomes including quality of life measures such as ability to perform daily activities after surgery
- As cellular senescence is a driver of frailty in animal models, work is ongoing to determine whether levels of tissue senescence correlate with frailty and the development of post-surgical limitations in humans
- If so, senescence may be a targetable method of treating frailty prior to cancer treatment to improve outcomes



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Acknowledgements



Professor
Lynda Wyld



Professor
Ilaria Bellantuono



Jenna Morgan, Miguel Juarez, Maria Cruz Villa-Uriol and Ziquian Sun



Remarkable research
for healthy ageing

THE DUNHILL MEDICAL TRUST