Feasibility and effectiveness of preoperative exercise therapy for cancer diagnoses in Victoria.

Presented by: **Mr. Declan Hennessy MSc.**

Doctor of Philosophy (Clinical Exercise Physiology)

Supervised by: **Prof. Fergal Grace, Dr Matt Wallen**

Prehabilitation Timeline

1946
BMJ

2 Months Prehab in 12,000 men presenting for enlistment in WW2

(2002)
Gill et al.

Prehab to prevent functional decline in home dwelling physically frail.

(2011)
Valkenet et al.

Systematic Review of 12 RCTs in patients undergoing cardiac and abdominal surgery

(2011)
Lemanu et al.

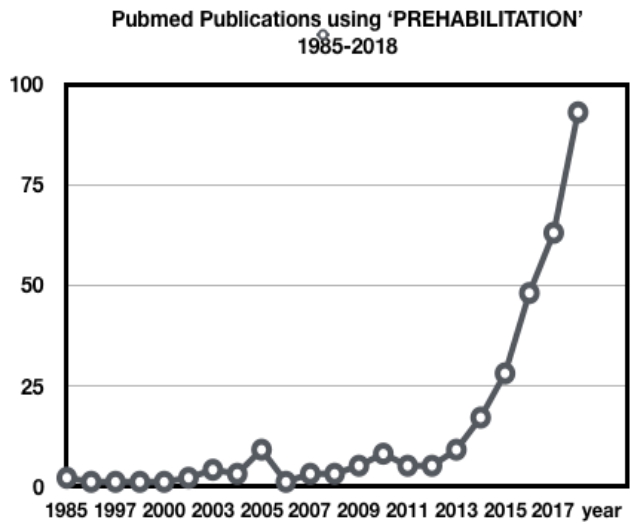
Prehab confers limited effect (1/8) in post surgery fitness

(2016)
Moran et al.
Wang et al.

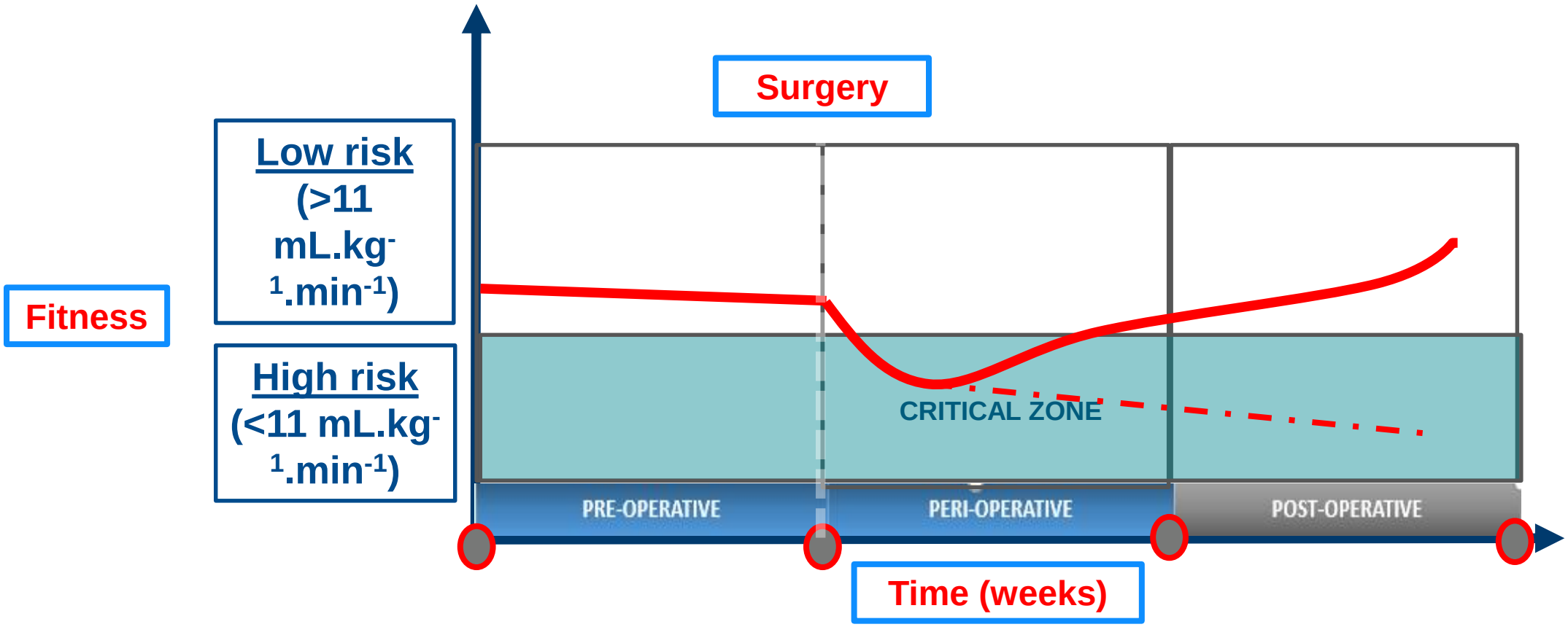
2 x Systematic Review and Meta-analysis found improved postoperative function and pain in joint replacement and intra-abdominal surgery

(2016)
Loughnea et al.

Prehab improves fitness in 'dual hit' treatment, but nonconclusive



Fit for surgery - Prehabilitation



Application of prehabilitation in Western Victoria

Developing a best practice, preoperative exercise therapy 'prehabilitation' model for patients with prostate, colorectal and breast cancer, in the Grampians region of Victoria

The PROTECT Trial

Dr. Matthew Wallen[1]
Prof. Fergal Grace[1]
Dr. Stephen Brown[2]
A/Prof. Anna Wong Shee[2,5]
Declan Hennessy[1]
Dr. Jack Harvey[1]

Luke Evans[2]
Dr. Jonathan Rawstorn[3]
Gay Corbett[2]
Joylene Fletcher[2]
Leanne Storer[2]
Rhys Duncan[4]
Lea Marshall[6]
Prof. Stuart Berzins[7]

Pre-registered clinical trial (ACTRN12619000214134)

Recruitment
9/19 – 5/20
(n=60)

Confirmed diagnosis & requires surgery

⇩

Initial Assessment: Sub-maximal Exercise Test & measures

⇩

Stratified (Cancer Type) & randomised

⇩ ⇩

Prehabilitation | **Control**

⇩ ⇩

Pre surgery Re-assessment: Sub-maximal Exercise Test & measures

⇩ ***Surgery*** ⇩

30 day post surgery Re-assessment: Sub-maximal Exercise Test & measures

Prehabilitation intervention

- **How often**:
  - 2-3 x per week for 4+ weeks
- **How hard**:
  - Aerobic exercise: 40-70% of heart rate reserve (HRR) achieved during initial exercise test.
- **How long**:
  - 45-60 minutes each session
- **Doing what**:
  - Supervised aerobic exercise (Treadmill, Stationary bike, cross-trainer)

Where and Whom?

Primary Study Location:

Ballarat Health Services
Putting your health first

Secondary Study Locations:

Stawell Regional Health

Wimmera Health Care Group

Enrolment criteria:

- Written informed consent
- Diagnosed with prostate, colorectal or breast cancer requiring surgery
- Age ≥ 18 years
- ECOG status 0-1
- Participant availability

Feasibility and effectiveness of preoperative exercise therapy for cancer diagnoses in Victoria.

Presented by: **Mr. Declan Hennessy MSc.**

Doctor of Philosophy (Clinical Exercise Physiology)

Supervised by: **Prof. Fergal Grace, Dr Matt Wallen**

Study design – Methodology

- **CONSORT** compliant randomised controlled trial (RCT) for prostate, colon and breast cancer patients undergoing surgery.

- **Primary outcomes:**
  - **safety** (adverse events and serious adverse events),
  - **feasibility** (adherence and compliance) and
  - **effectiveness** (cardiopulmonary testing)

- **Secondary outcomes**
  - Blood biochemistry (immunology), Quality of Life (QoL), large artery compliance

("Consort - Welcome to the CONSORT Website", 2019)