# A prospective trial of a structured exercise program to lessen fatigue in patients with advanced prostate cancer (aPC) undergoing androgen deprivation therapy (ADT)

Dr Prahalad E

Consultant Medical Oncologist

Narayana Health City, Bangalore

# Background

- Moderate exercise, including three or more hours of aerobic activity weekly, plus resistance training and weight-bearing exercises are suggested who are on Androgen deprivation therapy(ADT).
- Structured exercise programs have been studied in a number of trials as a way to prevent or ameliorate ADT-related complications.
- Overall, there is good evidence that exercise can provide benefit for muscle mass and strength, cardiorespiratory fitness, fatigue and declining physical function.
- There is less robust evidence for exercise-induced improvements in bone loss, prevention of falls and fractures, sexual dysfunction, and anxiety and depression.

PROSTATE CANCER - ADVANCED

120 Poster Session

# A prospective trial of a structured exercise program to lessen fatigue in patients with advanced prostate cancer (aPC) undergoing androgen deprivation therapy (ADT).

Benjamin L. Maughan, Neeraj Agarwal, Darren Walker, Adriana M Coletta, Blake Nordblad, Umang Swami, Sumati Gupta, Saundra S. Buys, Manish Kohli, Pamela A Hansen, Kenneth M Boucher, Norah Lynn Henry; Huntsman Cancer Institute at the University of Utah, Salt Lake City, UT; Hunstman Cancer Institute at the University of Utah, Salt Lake City, UT; Department of Medicine, Huntsman Cancer Institute at the University of Utah, Salt Lake City, UT; University of Michigan Medical School, Ann Arbor, MI

# Background

- Cancer-related fatigue, one of the most significant issues affecting quality of life (QOL), is reported by up to 75% of men with advanced prostate cancer (aPC) on ADT.
- Exercise may serve as a tool to improve fatigue in cancer patients.
- This trial examined the effect of a structured exercise program on fatigue in men with aPC.

# Methods

- This prospective trial enrolled participants with aPC treated with an ADT-based regimen on a 12 week exercise program at a single institution.
- Patients with at least 4/10 tiredness, self-reported sedentary lifestyle (<90 min/week exercise), no evidence of disease progression, and no chemotherapy within 3 months were eligible.

# Methods

- Participants underwent peak aerobic capacity, muscular strength and endurance testing before and after 12 weeks of structured, guided exercise through the institution's hospital-based exercise oncology program called Personal Optimism With Exercise Recovery (POWER).
- Participants completed symptom questionnaires including the 7-item PROMIS fatigue at baseline and after 6 and 12 weeks.
- Participants had 45-60 min supervised sessions weekly, either in person or virtually, and were instructed to work up to 150 min of moderate activity and 2 resistance training sessions weekly.

# Methods

- The primary endpoint was change in fatigue; a 4 point reduction in T score is a clinically important difference.
- The key secondary endpoint was change in relative peak aerobic capacity (ml/kg/min). Mean and 95% Gaussian confidence intervals were reported.

# Results

- 119 participants with aPC, 92% of whom had metastatic disease, enrolled between 2018 and 2022.
- Nine withdrew from the study and 10 were lost to follow-up.
- Data were incomplete for 28 participants primarily due to inadequate follow-up during COVID.
- Of the 119 enrolled participants, 96% were white, 83% were married, 52% had at least a college degree, and 25% were currently employed.
- Mean age was 70.3 years and mean BMI was 30.5 kg/m2 .
- 29 participants (24%) were receiving treatment with ADT alone, and the rest were receiving a combination of ADT and targeted therapy. None were on chemotherapy.

# Results

- The primary endpoint was evaluable in 72 participants.
- There was a clinically significant reduction in fatigue of 5.1 points (95%CI 3.6-6.7) between baseline (56.7 [95%CI 55.1-58.0]) and 12 weeks (51.4 [95%CI 49.8-53.1]).
- Of those who completed both aerobic fitness assessments (n=76), there was a 3.1 ml/kg/min (95%CI 2.1-4.0) improvement in relative peak aerobic capacity from a mean 27.5 [95%CI 25.8-29.2] at baseline to a mean 30.6 [95%CI 28.8-32.3] at 12 weeks.

# Limitations

- Lack of internal comparison group.
- Single institution study limiting robustness.
- POWER program results might not be applicable to independent efforts by patients.
- Notable amounts of missing data which is primarily due to research challenges during COVID.

# Conclusion

- Completion of a 12-week supervised exercise regimen led to a clinically significant improvement in fatigue and peak aerobic exercise capacity.
- These findings support routinely recommending exercise for and examining symptom management in patients with metastatic cancer to improve QOL.

THANK YOU