


# Oncologists and their Advocacy of Exercise as a Treatment Modality Post Diagnosis of Breast Cancer

A business card for Mermaid Central Medical Clinic. The left side features a photograph of a sunset over the ocean with a large wave in the foreground. The right side is white with an orange header bar containing the clinic's name and a caduceus logo. Below this, the doctor's name and qualifications are listed, followed by contact numbers for phone, home, and fax. At the bottom, the clinic's hours of operation are provided.

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## main messages

- Exercise is an evidence based cancer treatment modality
- Exercise is seen as valid amongst local oncologists
- Despite these two points exercise may not routinely be being prescribed to patients during their cancer treatment however this provides scope for improvement in clinical practice

# background

- Physical activity is important for everyone.
- Exercise is necessary to treat chronic disease of which cancer is rapidly becoming one
- Exercise Improved QALY measures typically impacted by cancer and its treatment
  - Weight reduction. Improving depression, managing fatigue, and reversing muscular atrophy.

# background

- Patients also can suffer various secondary aspects from cancer impacting their lives comorbidities
- Biological mechanism support exercise as a treatment (17)
- physical activity has been shown effective in decreasing the risk of recurrence

# studies

- Ballard-Barbash et al. in their systematic review
- Ibrahim and Al-Homaidh in a meta-analysis
- Jones et al.
- Mutire et al
- Spence et al.
- Evidence for cross cultural applicability
- Evidence for safety and tolerability



# purpose

- purpose of this study

“To assess the behaviour of medical and radiation oncologists in Australia in regards to their promotion of physical activity to cancer patients”

Secondarily – Assess barriers to Prescribing



# aims

- Assess current promotion of exercise rates
- Assess practitioners' levels of current interest in and knowledge of benefits of exercise
- Assess possible obstacles to the prescription of exercise



# materials and methods

- cross sectional study of oncology consultants and trainees in Queensland, Australia.
- Electronic Questionnaire
- Ethics approval received
- 3/12, with 1/12 reminder
- Consent was obtained



# materials and methods

- Study participants were considered eligible if they were:
  - a member of Medical Oncology Group of Australia, or
  - a fellow or trainee of Radiation Oncology Faculty, Royal Australian and New Zealand College of Radiologists or
  - trainee of the Royal Australian College of Physicians specialising in Medical Oncology,
  - practiced in the last year,
  - based in Queensland, Australia
  - they treated breast cancer patients in the past three months.

# questionnaire

- Questions aimed at obtaining information on medical practitioners day to day clinical discussions
  - How many patients would have their current physical activity levels assessed during consultation?
  - How many patients would you discuss the benefits of exercise with?
  - When is the best time to discuss the benefits of exercise?
  - What type of exercise is recommended?
  - Is prescribing physical activity a valid adjunct therapy in treating breast cancer?
  - What percentage of patients would use this prescription after discussion?
  - What would be the biggest limitations to prescribing physical activity during treatment for a patient?
  - What would be the biggest boundaries to prescribing physical activity following treatment for cancer, during a patient's rehabilitation?
  - Are you aware of published guidelines on exercise for cancer survivors such as the expert panel conducted by the American College of Sports Medicine in 2009?
  - Are you aware of research indicating that exercise can help in the treatment of other forms of cancer besides breast cancer?
  - Rate the validity of a series of statements:
    - Patients are safe pursuing exercise while recovering from cancer treatment
    - Patients would like information on cancer rehabilitation and exercise
    - Patients follow information given on cancer rehabilitation and exercise
    - Patients are able to exercise while having treatment for cancer
    - My colleagues believe physical activity is important treatment modality
    - There is a lot of evidence for physical activity being beneficial in a diagnosis of cancer
    - There should be more funding made available for provision of exercise during cancer treatment
- Demographic details of participants
- Godin Leisure Time Exercise Questionnaire:

# results

- The study had a response rate of 21.24%
- 87% felt that exercise was a very or moderately valid adjunct treatment for breast cancer.
  - 112 % were neutral and no respondents felt it was invalid.
- 52.5% of participants discussed current physical activity levels with all or most patients
- 50% reported discussing benefits of pursuing physical activity during and after treatment
- Aerobic favoured over anaerobic exercise.



## results

- Majority of participants felt that only 25-50% of patients would follow an exercise prescription of it was given.
- Only 1 person felt it would be used 100% of the time.

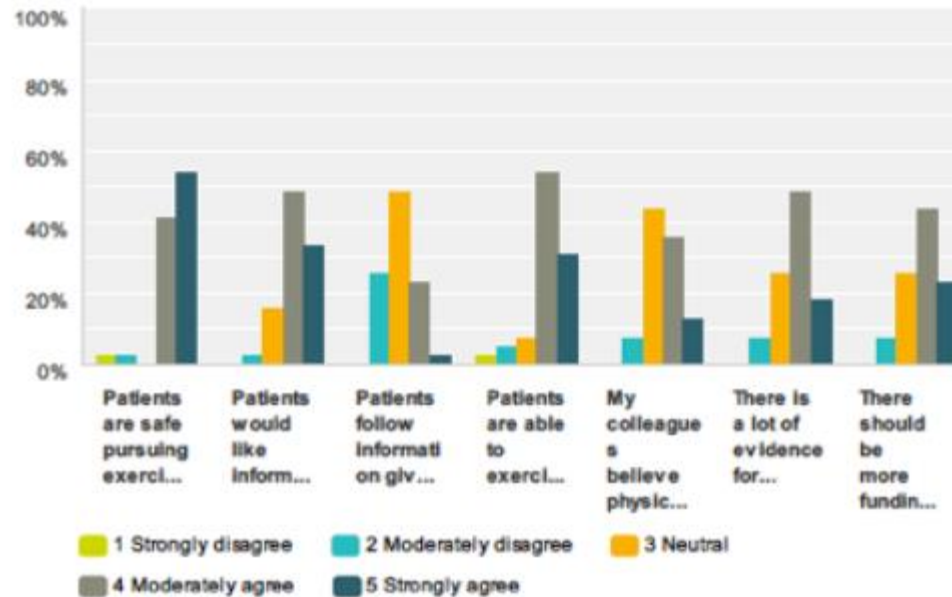
# results

- Barriers during Rx
  - 63% - time
  - 56% - lack of knowledge
  - 16% - concern regarding patient safety
  - 16% - lack of evidence
- Barriers After Rx
  - 56% - lack of knowledge
  - 50% - time
  - 16% - lack of evidence
  - 10% - concern regarding patient

# results

**Q12 On a scale of 1 to 5, 1 being strongly disagree, and 5 being strongly agree, please rate the following statements when considering breast cancer patients:**

Answered: 39 Skipped: 9





## results

- no significant link was identified between a clinicians own exercise philosophy and whether or not they recommend exercise to their patients as a treatment



# discussion

- Exercise is effective
- Exercise prescription has been limited.
- Patients want exercise prescription
- Rates of discussion may possibly be increasing
- Still barriers to prescription as evidenced by high awareness but lower prescription rates





# addressing the barriers

- Changing attitudes towards cancer survivorship vs suffering
- Funding of Survivorship Programs
- National campaigns to provide general education and Awareness
- Private health funds getting involved
- College training programs
- Multidisciplinary approaches
- GP initiatives – GPMP, TCA;



# future

- Study Limitation
- Larger sample sized and higher response rate
- Rural vs Urban



# conclusion

- Exercise is an evidence based cancer treatment modality
- Exercise is seen as valid amongst local oncologists
- Despite these two points exercise may not routinely be being prescribed to patients during their cancer treatment however this provides scope for improvement in clinical practice.

- [1] C. Slade and J. Keating, "Exercise Prescription; A Case for Standardised Reporting," *British Journal of Sports Medicine*, vol. 46, pp. 1110-1113, Nov 2012.
- [2] R. Knols, N. Aaronson, D. Uebelhart, J. Fransen and G. Aufdemkampe, "Physical Exercise in cancer Patients During and After Medical Treatment: A Systematic Review of Randomized and Controlled Trials," *Journal of Clinical Oncology*, vol. 23, no. 16, pp. 3830-3842, June 2005.
- [3] K. Wolin, A. Schwartz, C. Matthews, K. Courneya and K. Schmitz, "Implementing the Exercise Guidelines for Cancer Survivors," *Journal of Supportive Oncology*, vol. 10, no. 5, pp. 171-177, 2012.
- [4] L. Jones, K. Courneya, C. Peddle and J. Mackey, "Oncologists Opinions towards Recommending Exercise to Patients with Cancer: A Canadian National Survey," *Supportive Care Cancer*, vol. 13, pp. 929-937, 2005.
- [5] A. Daley, S. Bowden, D. Rea, L. Billingham and A. Carmichael, "What Advice are oncologists and surgeons in the UNited Kingdom giving to Breast Cancer Patients about Physical Activity?," *International Journal of Behavioural Nutrition and Physical Activity*, vol. 46, no. 5, Sep 2008.
- [6] K. Karvinen, K. DuBose, B. Carney and R. Allison, "Promotion of Physical Activity among Oncologists in the United States," vol. 8, no. 1, pp. 35-41, 2010.
- [7] G. Godin and R. Shephard, "A simple method to assess Exercise Behaviour in the Community," *Canadian Journal of Applied Sports Science*, vol. 10, pp. 141-146, 1985.
- [8] "The Godin-Shephard Leisure Time Physical Questionnaire," *Health and Fitness Journal of Canada*, vol. 4, no. 1, pp. 18-22, 2011.
- [9] J. Ligibel, "Lifestyle Factors in Cancer Survivorship," *Journal of Clinical Oncology*, vol. 30, no. 30, pp. 3697-3704, October 2012.
- [10] R. Newton and D. Galvao, "Exercise in Prevention and Management of Cancer," *Current Treatment Options in Clinical Oncology*, vol. 9, pp. 135-146, 2008.
- [11] S. Mishra, R. Scherer, P. Geigle, D. Berlanstein, O. Topaloglu, C. Gitay and C. Snyder, "Exercise INterventions on Health-Related Quality of Life for Cancer Survivors," *Cochrane Database of Systematic Reviews*, no. 8, 2012.
- [12] I. De Backer, G. Vreugdenhil, M. Nijziel, A. Kester, E. van Breda and G. Schep, "Long-term Follow-up after Cancer Rehabilitation using High Intensity Resistance Training: Persistent Improvement of Physical Performance and Quality of Life," *British Journal of Cancer*, vol. 99, pp. 30-36, 2008.
- [13] W. Demark-Wahnefried, N. Aziz, J. Rowland and B. Pinto, "Riding the Crest of the Teachable Moment: Promoting Long-Term Health after Cancer Diagnosis," *Journal of Clinical Oncology*, vol. 23, no. 24, pp. 5814-5830, August 2005.
- [14] M. Irwin, "Physical Activity INterventions for Cancer Survivors," *British Journal of Sports Medicine*, vol. 43, pp. 32-38, 2009.
- [15] L. Jones, M. Haykowsky, J. Swartz, P. Douglas and J. Mackey, "Early breast cancer therapy and cardiovascular injury," *Journal of American College of Cardiology*, vol. 9, no. 50, 2007.
- [16] E. Giovannucci, "Physical Activity as a Standard Cancer Treatment," *Journal of the National Cancer Institute*, vol. 104, no. 11, pp. 797-798, June 2012.
- [17] R. Spence, K. Heesch and W. Brown, "A Systematic Review of the Association between Physical Activity and Colorectal Risk," *Scandinavian Journal of Medicine and Science in Sports*, vol. 19, pp. 764-781, 2009.
- [18] R. Ballard-Barbash, C. Friedenreich, K. Courneya, S. Siddiqi, A. McTiernan and C. Alfano, "Physical Activity, Biomarkers, and Disease OUTcomes in Cancer Survivors: A Systematic Review," *Journal of National Cancer Institute*, vol. 104, no. 11, pp. 815-840, June 2012.
- [19] L. Jones, J. Peppercorn, J. Scott and C. Battaglini, "Exercise Therapy in the Management of Solid Tumours," *Current Treatment Options in Oncology*, vol. 11, pp. 45-58, 2010.
- [20] E. Ibrahim and A. Al-Homaidh, "Physical Activity and Survival after Breast Cancer Diagnosis: Meta-analysis of Published Studies," *Medical Oncology*, vol. 28, pp. 753-765, 2011.
- [21] N. Mutrie, A. Campbell, S. Barry, K. Heffernon, A. McConnachie, D. Ritchie and S. Tovey, "Five-year follow-up of participants in a randomised controlled trial showing benefits from exercise for breast cancer survivors during adjuvant treatment. Are there lasting effects?," *Journal of Cancer Survivorship*, vol. 6, no. 4, pp. 420-430, Dec 2012.
- [22] S. Kenfield, M. Stampfer, E. Giovannucci and J. Chan, "Physical Activity and Survival after Prostate Cancer Diagnosis in the Health Professionals Follow-Up Study," *Journal of Clinical Oncology*, vol. 29, no. 6, pp. 726-732, 2011.
- [23] R. Spec, K. Courneya, L. Masse, S. Duval and K. Schmitz, "An Update of controlled physical activity trials in cancer survivors: a systematic review and meta-analysis," *Journal of Cancer Survivorship*, vol. 4, no. 2, pp. 87-100, June 2010.
- [24] M. Maddocks, S. Mockett and A. Wilcock, "Is Exercise an acceptable and practical therapy for people with or cured of cancer? A Systematic review," *Cancer Treatment Reviews*, vol. 35, pp. 383-390, 2009.

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