

NICaN AHP Brief Research Proposal

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The clinical question – hypothesis:

It is hypothesized that the side effects of prostate cancer can be positively influenced by a programme of lifestyle changes regarding physical activity.

The study background:

Prostate cancer is the most common cancer in men in the UK (excluding non-melanoma skin cancer) accounting for a quarter of all new cancer cases (Cancer Research UK 2010). In 2007 there were 915 new cases of prostate cancer diagnosed in Northern Ireland (Northern Ireland Cancer Registry (NICR) 2010). Recent increases in prostate cancer incidence have been attributed to more widespread use of the prostate specific antigen (PSA) test leading to earlier diagnosis. Whilst survival rates are improving, it should be noted that the relative survival in Northern Ireland (NI) remains significantly lower than other parts of the United Kingdom (UK) and Europe (NICR 2007). Side effects of prostate cancer and its treatment have been widely documented. These include fatigue, emotional distress, decreased quality of life (QOL), decreased function and increased risk of secondary cancers (NCCN 2010).

Trials to date have employed various types of intervention. Some employed multiple lifestyle changes including modification of fruit, vegetable and saturated fat intake, stress management techniques, cognitive behavioural strategies and support group attendance as well as different types of exercise. Others focused on exercise alone including aerobic, resistance, strength and endurance training. Previous studies have found that cancer survivors who meet physical health guidelines experience significantly higher QOL; however, the majority of cancer survivors are not meeting these recommendations (Morey, Snyder et al. 2009). Bellizzi et al. (2005) carried out an investigation of health behaviours and found cancer survivors were significantly more likely to report functional limitations and less likely to describe their health status as excellent. There is a need for improvement in the behaviour of cancer survivors in relation to risk factors such as smoking, diet and exercise. Coups and Ostroff (2005) found approximately 70% of prostate cancer survivors to be inactive and 62% to be overweight. They recommend provision of interventions to address these risk factors.

The rationale for the new research:

Government guidelines regarding physical activity for the normal population should also apply to the cancer population. As healthcare professionals we have a role in facilitating adherence to these guidelines for our patients.

Currently this local healthcare trust has no specific rehabilitation interventions for prostate cancer patients. Generalised support groups exist in the voluntary sector, and a recent pilot programme for breast cancer survivors generated very positive feedback from participants.

Research is recommended to determine precise exercise prescriptions, and to investigate longer term effects of lifestyle interventions in prostate cancer patients. Cost analysis should also be carried out, with the expectation of financial benefits to the NHS in the long term due to reduced future hospital admissions.

A basic study plan:

A literature review of current evidence for exercise and lifestyle interventions in prostate cancer patients should be carried out. This will help identify which types and durations of exercise are most beneficial.

A suggested pilot study would be a six-week, hospital-based, multidisciplinary lifestyle change programme for prostate cancer patients on radiotherapy, followed by transition to a leisure centre scheme for a further six to eight weeks. The initial six weeks could include education from various professionals, such as physiotherapists, occupational therapists, dieticians and social workers. The physical exercise portion should be supervised by a physiotherapist, and include simple repeatable exercises tailored to each individual participant. A control group could be given written information about exercise/physical activity. They would not attend structured sessions, but could be offered a place on the programme following completion of the intervention period.

Reliable, valid outcome measures regarding e.g. fatigue, strength, cardiovascular fitness and quality of life should be chosen. Participants should be assessed before, during and after the intervention period.

Supporting references:

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