

Greater understanding of molecular pathways involved in the mediation of the effects of hypoxia open the possibility of targeted therapy based on hypoxia modification. The PARP inhibitor class of drugs has a nicotinamide like effect and will be important to evaluate in the setting of hypoxia modification. Our understanding of hypoxia has led to a greater ability to identify those tumours where hypoxia is prominent. Immunohistochemistry of intrinsic markers, osteopontin, functional imaging, with flutemisonidazole or blood oxygen level dependent MRI and genetic profiling have all been validated in this setting. Future translational studies should harness this new knowledge, identifying patients with clear evidence of hypoxia in the entry criteria and enable a new generation of clinical trials which will establish effective clinical schedules for hypoxia modification. Notwithstanding this the clinical community needs to critically appraise the current evidence and incorporate the proven methods of hypoxia modification already known to result in a survival advantage equal to or greater than many of the new chemotherapy drugs.

Scientific Symposium (Sun, 25 Sep, 09:00–11:00) Symptom Management

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INVITED

How Do Women With Breast Cancer Manage Symptoms of Cognitive Impairments While Undergoing Chemotherapy Treatment?

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Evidence suggests that women diagnosed with breast cancer experience cognitive changes as a consequence of chemotherapy treatment (Bower, 2008). Much of this evidence comes from self-report data, where women report perceived changes to their cognitive function. In contrast, evidence from neuropsychological measures of cognitive function is mixed with the majority of studies reporting subtle deficits in memory, concentration and executive functioning. It is possible that breast cancer patients are sensitive to subtle changes in cognitive function that current neuropsychological test employed are unable to detect, or that neuropsychological tests may not equate with everyday cognitive problems (Downie et al, 2006). There is moderate evidence that self-reported cognitive problems are more likely to be associated with emotional distress, depression and fatigue than with neuropsychological functioning (Pullens et al, 2010). There may be other variables associated with subjective and objective measures of cognitive function that have not been considered. For example, one area that has not yet been considered is whether patients keep their brain active during chemotherapy which could potentially reduce impairment results on neuropsychological tests. There has been a rise in cognitive-based leisure activities such as the Nintendo brain training game, Sudoku puzzles and other cognitive-based games available on mobile phones and on hand-held technologies such as the iPad. It is possible that some patients undergoing chemotherapy involve themselves with cognitive leisure-based activities while on sick leave. This may result in practice effects when these patients are assessed on neuropsychological tests. This study explored such possibilities, such as what activities patients engage in during chemotherapy treatment. As well as using neuropsychological tests, an in-depth evaluation into what activities women undertook during treatment was conducted in order to gain a better understanding.

Fifty women diagnosed with breast cancer were recruited from a breast cancer clinic in the UK. All completed neuropsychological assessments before, during and after chemotherapy treatment. At the end of their treatment, 31 women were interviewed and asked about their general health and well-being, their coping styles and how they spent their time whilst on sick leave, such as the types of cognitive activities undertaken. Findings suggest that the majority of women self-reported experiencing cognitive changes but only showed a decline on tests of cognitive attention. Nearly half the sample reported engaging in either a cognitive-based activity during their treatment or using compensatory strategies. The implications for future study designs for assessing cognitive functioning as well as the ways in which women can manage their perceived symptoms of cognitive impairment will be discussed.

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INVITED

Cough Management in Lung Cancer

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Background: Cough is a common and distressing symptom in lung cancer patients. The clinical management of cough in lung cancer patients is

suboptimal with limited high quality research evidence available. The aim of the presentation is to present a clinical guideline developed in the UK through scrutiny of the literature and expert opinion, in order to aid decision making in clinicians and highlight good practice.

Methods: Two systematic reviews, one focusing on the management of cough in respiratory illness and one Cochrane review specifically on cancer, were conducted. Also, data from reviews, phase II trials and case studies were synthesized. A panel of experts in the field was also convened in an expert consensus meeting to make sense of the data and make clinical propositions.

Results: A pyramid of cough management was developed, starting with the treatment of reversible causes of cough/specific pathology. Initial cough management should focus on peripherally acting and intermittent treatment; more resistant symptoms require the addition of (or replacement by) centrally acting and continuous treatment. The pyramid for the symptomatic management starts from the simpler and most practical regimens (demulcents, simple linctus) to weak opioids to morphine and methadone before considering less well-researched and experimental approaches.

Conclusion: The clinical guidelines presented aim to provide a sensible clinical approach to the management of cough in lung cancer. High quality research in this field is urgently required to provide more evidence-based recommendations.

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INVITED

Bone Disease – Osteoporosis

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Osteoporosis is a major public health problem because of the increased risk of fractures and the resultant morbidity and mortality. Worldwide it is estimated that one in three women and one in five men over fifty will sustain an osteoporotic fracture. In the European Union someone has a fracture as result of osteoporosis every 30 seconds and with an increasingly larger ageing population the yearly number of hip fractures in the EU is expected to more than double over the next fifty years (International Osteoporosis Foundation, 2008).

Bone health is a concern for many patients with breast or prostate cancer because many of their treatments cause bone loss (Cancer Treatment Induced Bone Loss – CTIBL) resulting in osteoporosis or osteopenia. Osteoporotic fractures cause significant disability, pain and even death. Although there is ample evidence of the need for and benefits of screening for osteoporosis to prevent morbidity and mortality this evidence does not always translate into practice (Mac Laughlin, 2010).

Nurses have a significant role in increasing patient's awareness of bone health issues if they are receiving hormone therapy and educating them on diet and lifestyle interventions, prevention of falls and medication management.

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INVITED

Peripheral Neuropathies Associated With Chemotherapy

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Peripheral neuropathies are common side effects of chemotherapy including taxanes or platinum. Symptoms may come quickly, after a single dose, and often increases with higher doses and number of treatments. The symptoms may be reversible but many patients get irreversible damages to peripheral nerves.

Patients with peripheral neuropathies can experience numbness, a tingling or burning sensation, a loss of sensation or a sense of pain in hands and feet and the symptoms are often symmetric and may give changes in functional ability. Peripheral neuropathies can be dose-limiting and it can be necessary to cancel effective chemotherapy because of these side effects. Today we don't have much to offer these patients other than advices on how to cope and deal with these side effects and to change chemotherapy if possible. By studying literature on studies investigating different drugs that could prevent the onset of peripheral neuropathies in patients receiving platinum- or taxane-based chemotherapies, and by searching for guidelines for prevention and treatment of peripheral neuropathies, the aim is to get evidence-based guidelines for symptom management.