NEWSROUND

Selected press reports compiled by the ESO Cancer Media Centre

Culturally appropriate materials increase cancer screening rates

→ Cancer

A recent randomised trial has found that low-income Chinese-speaking patients in America were six-times more likely to be screened for colorectal cancer when a clinic-based, multilingual health educator provided culturally appropriate counselling and educational materials.

Until a few decades ago, colorectal cancer was predominantly a Western disease affecting Caucasians. Studies of immigrants to the US from low-incidence countries show that colorectal cancer incidence increases within just one generation. In Hawaii and Los Angeles, colorectal cancer incidence rates among Japanese Americans are among the highest in the world. Moreover, these patients are likely to present with more advanced disease.

When detected at an early stage, colorectal cancer patients have an excellent prognosis, yet in America screening rates are low, with just over 50% of the eligible population having had a recent test.

Researchers investigated whether a clinic-based, multilingual intervention could increase uptake of colorectal cancer screening by faecal occult blood test among low-income, poorly integrated Chinese in America. One group received standard care and the other group received counselling from a trilingual and bicultural health educator and were given multilingual videos, pamphlets and test instructions.

Within the six months of the intervention, seven out of ten people (69.5 %) in the intervention arm had completed faecal occult blood test screening compared to fewer than three out of ten (27.6 %) in the control arm.

"Our results confirm the notable effectiveness of a multi-component, culturally appropriate health education program to promote faecal occult blood test screening within an ethnic minority group," the authors write. "The large effect of our intervention suggests the remarkable impact of culturally appropriate health education among populations with limited health information," they conclude.

■ Promoting culturally appropriate colorectal cancer screening through a health educator: a randomized controlled trial. S-P Tu, V Taylor, Y Yasui, et al. *Cancer* 1 September, 107:959–966

Tailoring treatment to disease severity can improve medulloblastoma survival rates

→ Lancet Oncology

Radiotherapy that is adapted to the severity of disease and followed by a shortened course of chemotherapy substantially improves the survival of children with medulloblastoma, claim investigators in a recently published study.

Amar Gajjar, from St Jude's Children's Research Hospital in Memphis, Tennessee, said, "Not only can we now cure about 70% of children with high-risk medulloblastoma, we can also cure more than 80% of those with standard-risk disease, with a shorter, and therefore more convenient, chemotherapy approach". Using the standard therapy, children with high-risk medulloblastoma have a 30–40% chance of surviving to five years, and chemotherapy usually lasts for about 12 months.

In their study, the researchers adjusted the doses of radiotherapy given to 134 children with medulloblastoma, according to how severe their disease was. Children were classified as being either at standard risk, if they had only small tumours remaining after surgery and no evidence that the disease had spread to the rest of the body, or at high risk if they had larger tumours, or evidence of spread to other organs. Children in the high-risk group were given a higher dose of radiotherapy to the neck and spine than those in the standard-risk group. However both groups received an additional boost of radiation to the actual site of the tumour, a shortened course of chemotherapy, and a reinfusion of bone-marrow stem cells after each cycle of chemotherapy.

The children's survival rate increased to around 70%. Furthermore, Gajjar explains, "by reducing the amount of cisplatin from eight doses to four doses, and the amount of vincristine from 32 doses to just eight doses, we could alleviate a lot of the neurotoxicity associated with the higher dose of vincristine, without reducing survival."

Gajjar predicts that these findings could be the start of some exciting advances in brain cancer. "Our research

focused on understanding the biology of medulloblastoma," he said. "We now need to develop a biological system of staging that works in conjunction with the current clinical staging system to further refine treatment for this disease." Until then, he advises, "investigators should consider adopting a similar therapeutic strategy to ours for their high-risk patients. This approach should be feasible in most paediatric oncology units at academic medical centres, but meticulous staging and careful attention to detail during radiotherapy planning and treatment are essential to obtaining similar outcomes."

■ Risk-adapted craniospinal radiotherapy followed by high-dose chemotherapy and stem-cell rescue in children with newly diagnosed medulloblastoma (St Jude Medulloblastoma-96): long-term results from a prospective, multicentre trial. A Gajjar, M Chintagumpala, D Ashley, et al. *Lancet Oncology*, published online 7 September, doi:10.1016/S1470-2045(06)70867-1

Exercise may improve colorectal cancer outcomes

➔ Journal of Clinical Oncology

Two separate studies have found that physical activity after patients are diagnosed with colorectal cancer may have a protective effect. The studies found that the risk of colorectal cancer recurrence and overall mortality decreased by around 55% among patients who did more physical activity, compared to those who were not physically active.

Both studies saw an improved prognosis with four to five 30-minute sessions of brisk walking a week, which is equal to 9 metabolic-equivalent-task (MET) hours per week. However, to see significant benefits, the length of walking time had to be doubled, or the intensity of the work-out had to be significantly increased (to 18 MET hours per week). Fitness levels before diagnosis did not appear to affect mortality.

In previous studies, exercise has been shown to have a preventive effect on breast cancer recurrence and mortality. Further research is needed to explore exercise and cancer and to examine the safety aspects of exercise for patients more prone to heart disease.

■ Physical activity and survival after colorectal cancer diagnosis. JA Meyerhardt, EL Giovannucci, MD Holmes, et al; Impact of physical activity on cancer recurrence and survival in patients with stage III colon cancer: findings from CALGB 89803. JA Meyerhardt, D Heseltine, D Niedzwiecki, et al; Cancer survival: time to get moving? [editorial]. W Demark-Wahnefried. *J Clin Oncol* 1 August, 24:3527–34; 3535–41; 3517–18

Many lower-risk prostate cancer patients may be overtreated

➔ JNCI

More than half of men with lower-risk prostate cancer received surgery or radiation treatment when a wait-and-see approach of no therapy and active surveillance would have been a reasonable option, according to a new study from the University of Michigan Comprehensive Cancer Center.

Research has shown that older men with lower-risk prostate cancer who choose so-called watchful waiting are likely to die from another cause during the first 20 years after their cancer diagnosis. Meanwhile, surgery or radiation to treat prostate cancer can lead to complications such as erectile dysfunction, urinary incontinence and bowel difficulties.

Researchers looked at 64,112 men diagnosed with early-stage prostate cancer. Men were divided into high-risk or low-risk categories, based on characteristics of their tumours. Among the 24,835 men with lower-risk cancers, 55% percent were treated with initial surgery or radiation, suggesting that aggressive treatment is quite common even among men where an expectant approach is a viable option.

The researchers found that, among men with lower-risk cancers, those under age 55 are more likely to be treated with surgery versus watchful waiting. In contrast, men aged 70–74 were more likely to be treated with radiation over watchful waiting. From 2000 through 2002, more than 13,000 men with lower-risk cancer received treatment with surgery or radiation within the first several months after diagnosis.

"Based on data from this study, it is clear that the number of lower-risk patients who receive initial aggressive therapy is not trivial and we have to ask the question whether this is too much treatment for some of these men," says lead study author David Miller. "We should continue to explore our patients' preferences regarding the different treatments for early-stage prostate cancer and better educate them about the entire spectrum of options, including the appropriateness of initial active surveillance in many lower-risk cases."

■ Incidence of initial local therapy among men with lower-risk prostate cancer in the United States. DC Miller, SB Gruber, BK Hollenbeck. *J Natl Cancer Inst* 16 August, 98:1134–1141

Obesity leads to more aggressive ovarian cancer

➔ Cancer

A new study provides evidence that obesity leads to more aggressive types of ovarian cancer. Researchers found significant differences in types of epithelial ovarian cancer depending on body mass index (BMI). In women with advanced disease, a higher BMI was also associated with decreasing survival rates.

Increasing evidence points to the importance of obesity (BMI >30) and being overweight (BMI 25–30) in the development and outcome of several cancers, including cancers of the breast, uterus and bowel. The relationship between obesity and ovarian cancer is not as clearly understood.

Almost 1 in 60 women will develop ovarian cancer during their lifetime. Most will be diagnosed with advanced disease, and 70% will die within five years, making it one of the most lethal cancers.

There are several types of ovarian cancer, but tumours that begin from surface cells of the ovary (epithelial cells) are the most common.

Andrew Li of the Cedars-Sinai Medical Center and colleagues reviewed data relating to 216 women with ovarian cancer to identify relationships between obesity, ovarian cancer, tumour biology and outcome.

Comparison of obese with ideal-weight women showed that 29% of obese women and 10% of ideal-weight women had localised disease. However, obesity was significantly associated both with different cellular characteristics of the tumour and with outcome in women with advanced disease.

Obese women were more likely to have mucinous types of tumours and tended to have non-serous types as well.

Though increasing BMI was not associated with differences in treatment for women with advanced disease, a BMI greater than 25 was associated with shorter disease-free survival. Increasing BMI was associated almost linearly with increasing risk of mortality.

"This study supports the hypothesis that obesity impacts ovarian cancer mortality by influencing tumour biology," conclude the authors.

■ Effect of obesity on survival in epithelial ovarian cancer. JC Pavelka, RS Brown, BY Karlan, et al. *Cancer*, published online, 28 August, doi: 10.1002/cncr.22194

Gene linked to colorectal cancer also implicated in cancer of the prostate

➜ Journal of Clinical Oncology

Important new information has emerged from the largest group of colorectal cancer families ever studied. The German HNPCC Consortium studied 574 families with a form of hereditary colorectal cancer called Lynch Syndrome. Two genes, MLH1 and MSH2, are implicated in this disease, and help to cause cancers by failing to repair defects in DNA which are cropping up all the time in normal wear and tear of the body's cells. The cancers are not associated with polyps, thus the acronym HNPCC, which stands for hereditary non-polyposis colorectal cancer.

The researchers focussed on tumour material from 1,381 cancers identified in a total of 988 patients from all over Germany. Definite or assumed mutations in the gene MLH1 were found in the tumours of 181 and 254 patients, respectively, and in the gene MSH2 in 259 and 294 patients, respectively.

Patients with the MLH1 mutations were younger when their first tumour was diagnosed and when the first colorectal cancer was picked up. Rectal cancer and cancer of the stomach were diagnosed very frequently in patients with either mutation. Several patients developed prostate cancers, all of whom had MSH2 mutations in the original cancer specimen. The time between first and subsequent cancers was shorter in patients whose cancer was on the left side of the colon.

The authors recommend a redefinition of treatment strategy for rectal cancers, regular surveillance of the stomach and earlier colonoscopy, especially in males, probably starting as early as 20 years of age. The link to prostate cancer in MSH2 mutation carriers needs to be borne in mind in the follow-up of these families in the genetics or oncology clinic.

■ Genotype-phenotype comparison of German *MLH1* and *MSH2* mutation carriers clinically affected with Lynch Syndrome: A report by the German HNPCC consortium. T Goecke, K Schulmann, C Engel, et al. *J Clin Oncol* 10 September, 24:4285–92

Genetic testing may predict if lung cancer will return

➜ New England Journal of Medicine

A recently published study has shown that genetic testing can help identify aggressive, early-stage, non-small-cell lung cancer.

Currently patients with early non-small-cell lung cancer, identified as stage IA, are not given chemotherapy after surgery, as clinical trials have indicated no benefit. However, in a quarter of these patients, the disease returns. Researchers from Duke University Medical Center, America, looked for a way of identifying at-risk patients.

Almost 130 patients with the disease took part in the study. The researchers found that they could accurately predict aggressive forms of lung cancer by scanning the patients' genes.

Many doctors believe the current staging system used to group lung cancer patients is no longer an accurate indicator of treatment. A genetic test now appears to be a more accurate way of deciding on treatment programmes for non-small-cell lung cancer patients with stage IA disease.

Further clinical trials are due to take place in America and Canada involving 12,000 cancer patients.

■ A genomic strategy to refine prognosis in early-stage non-small-cell lung cancer. A Potti, S Mukherjee, R Petersen, et al. *New Engl J Med* 10 August, 355:570-580