NEWSROUND

Selected press reports compiled by the ESO Cancer Media Centre

Women diagnosed with metastatic breast cancer should have primary tumour totally removed

→ Journal of Clinical Oncology

Surgery to remove the primary tumour is generally not advised for patients whose breast cancer has already spread at the point of diagnosis. This is because the disease is considered incurable. However, a recently published study has revealed that women who have a complete removal of the primary tumour have a 40% lower chance of dying of breast cancer. The population-based study carried out in Switzerland between 1977 and 1996 evaluated the impact of surgery on the original area of the cancer, and the survival of patients whose cancer had already spread when they were diagnosed with breast cancer. The study looked at all 300 metastatic breast cancer patients recorded at the Geneva Cancer Registry between 1977 and 1996. It compared mortality risks from breast cancer between patients who had surgery of the primary breast tumour and those who had not, and adjusted these risks for other prognostic factors. Women who had had their primary tumour totally removed and checked for healthy tissue all around had a 40% reduced risk of dying from breast cancer compared with women who did not have the same surgery. This prolonged survival did not differ significantly according to the location of the metastases , but in the stratified analysis the benefit was particularly evident for women in whom the cancer had only spread to the bone. In an accompanying editorial, Monica Marrow and Lori Goldstein, from the Fox Chase Cancer Center, Philadelphia, suggest that the relative benefit of aggressive multimodality therapy for women with stage IV breast cancer and a low disease burden should now be assessed.

■ Complete excision of primary breast tumor improves survival of patients with metastatic breast cancer at diagnosis. E Rapiti, HM Verkooijen, G Vlastos, et al. *J Clin Oncol* 20 June, 24:2743–2749; Surgery of the primary tumor in metastatic breast cancer: closing the barn door after the horse has bolted? (editorial) M Morrow, L Goldstein, *ibid* pp 2694–2696

Adult survivors of childhood cancer are more likely to face unemployment

→ Cancer

Adults who survived cancer as a child are twice as likely to be unemployed than the general population, according to a new study. The report showed that employment problems differed by cancer type, with survivors of some cancers being up to five times more likely to be out of work. Among other factors associated with increased risk of unemployment were: living in the US, younger age, and female gender. As part of the study, which was conducted by the Coronel Institute for Occupational Health, at the Academic Medical Center in Amsterdam, researchers systematically summarised and analysed data from 40 studies that investigated the questions of whether childhood cancer survivors have a greater risk of unemployment than the general population, and what factors may identify individuals and groups at risk.

Analysis of the data showed that adults treated for brain or other central nervous system tumours were five times more likely to be unemployed. Blood-cell and bone marrow cancer survivors had an elevated unemployment risk, but the difference did not reach statistical significance. Similarly, survivors of other cancers had no elevated risk.

Analysis of other factors indicated that nationality, gender, age at diagnosis, and physical and mental impairments were all linked to higher unemployment rates. For example, survivors in the US were three times more likely to be unemployed, while European survivors had no elevated unemployment risk. Female gender and younger age at diagnosis also predicted higher risk of failing to find work.

The prognosis for children diagnosed with cancer is excellent. More than seven in ten paediatric cancer patients now survive more than five years and most of those survive to adulthood. Survival is not without secondary problems, such as other cancers, heart disease hormone abnormalities, infertility, chronic fatigue and depression. These complaints can act as lifelong impairments to social development and well-being. Employment, and a professional career in particular, can be important to an individual's self-image and confidence.

Cancer can rob survivors of that and many other social experiences.

The authors conclude that "interventions aimed at obtaining and maintaining employment are needed, especially for the vulnerable subgroups." Such interventions, they argue, "could mitigate the economic impact of surviving cancer and improve the quality of life of survivors."

■ Adult survivors of childhood cancer and unemployment: a metaanalysis. AGEM de Boer, JHAM Verbeek, FJH van Dijk. *Cancer,* published online 22 May, doi: 10.1002/cncr.21974

Personality traits do not influence risk of developing or dying from cancer

➜ British Medical Journal

A new study has found no major impact of obvious personality traits on the chances of developing cancer or dying from the disease. The population-based study looked at around 5,000 German men and women aged between 40 and 65. The participants completed an extensive personality test and questionnaire on lifestyle factors and health. During the follow-up period of 8.5 years, 257 participants died and 240 were diagnosed with cancer.

The study examined five broad independent dimensions of personality – symptoms of depression; anger control; time urgency (those frequently concerned with the passage of time and how they can most efficiently fill it with productive activity); internal locus of control over the disease (the patient's belief that the onset and process of an illness is the result of their behaviour) and psychoticism.

Participants in whom these qualities were only weakly displayed were rated low on the personality scale, and those who demonstrated the characteristics more obviously were rated high. The study found that people who were rated higher on time urgency appeared to have a reduced risk of cancer. The risk of cancer did not increase for those who were rated lower on time urgency. The other major personality traits – anger control, psychoticism, internal locus of control and symptoms of depression – were not consistently associated with cancer. Even when family history, smoking, body weight, alcohol consumption and other factors were taken into account, personality did not appear to be a risk factor for cancer.

■ Personality, lifestyle, and risk of cardiovascular disease and cancer: follow-up of population based cohort. T Stürmer, P Hasselbach, M Amelang. *BMJ*, 10 June, 332:1359

Weight training not linked to lymphoedema in breast cancer survivors

➜ Journal of Clinical Oncology

A new study published in the *Journal of Clinical Oncology* suggests that there is no reason why breast cancer patients who have had lymph nodes removed should not take part in resistance exercise such as weight training. The randomised trial found that a six-month programme of resistance exercise did not increase the risk of lymphoedema, or worsen existing symptoms.

Breast cancer patients often have the lymph nodes under the arms removed to prevent the cancer spreading through the lymphatic system. This can lead to excess fluid building up in the body's tissues, causing long-term swelling of the arms. Doctors usually advise women to refrain from physical activity, for fear that this might trigger the onset of lymphoedema, or make an existing condition worse.

This latest study followed 45 breast cancer survivors who participated in an upper- and lower-body weight-training programme. The participants had an average age of 52 years, and their treatment, which included the removal of the main lymph node (axillary dissection), had finished between 4 and 36 months earlier. Thirteen of the women had lymphoedema at the start of the exercise programme.

The study participants underwent supervised weight-training sessions twice a week for six months. The circumference of their arms was measured at the beginning and at the end of the programme. The study found that none of the group involved in the exercise programme experienced a change in arm circumference and none showed clinical or self-reported signs of lymphoedema.

The study's authors call for a re-evaluation of common clinical guidelines that advise breast cancer survivors to avoid upper-body resistance activity for fear of increasing the risk of lymphoedema.

■ Randomized controlled trial of weight training and lymphedema in breast cancer survivors. RL Ahmed, W Thomas, D Yee, et al. *J Clin Oncol*, published online 15 May, doi:10.1200/JCO.2005.03.6749

Younger men with prostate cancer may benefit from radiation therapy

➜ Cancer

Men under the age of 55 with localised prostate cancer may benefit from radiation therapy as an alternative to invasive surgery according to a new study. The research is the first to investigate the outcome of radiation therapy in men under 55 years of age. The study reveals that external beam radiation therapy is as effective in younger prostate cancer patients as it is in older patients with same-stage, localised disease.

Prostate cancer is usually diagnosed in older men; however, younger men can also be affected. There is a strong perception

that younger age may be associated with a more aggressive disease and poorer prognosis. Consequently, doctors tend to recommend more aggressive treatments, such as radical prostatectomy, to younger patients – even to patients with local disease that has not spread. However, older patients diagnosed with a similar localised cancer are offered more choices, including external beam radiation therapy.

Andre Konski and colleagues from the Fox Chase Cancer Center in Philadelphia compared how men aged 55 and under performed five years after diagnosis compared to men aged between 60 and 69, and men aged 70 and over – looking at survival, disease progression, and whether blood tests (PSA) showed signs of disease recurrence. All the men had localised prostate cancer and were treated with external beam radiation.

They found no statistically significant differences in the outcomes of these three age groups after five years: 94%, 95% and 87% of patients in each respective age category were alive five years after diagnosis; 96%, 97% and 98% of patients in each respective age category were without metastatic disease; and 82%, 76%, and 70% of patients in each respective age category had no evidence of disease recurrence according to blood tests.

While this study did not compare radiation to other therapies, the authors concluded that "External beam radiation at appropriate dose levels has been shown to be equivalent to permanent prostate seed implant [brachytherapy] and radical prostatectomy in the treatment of patients with stage T1-2 prostate cancer." Because younger men with localised disease respond as well as older men to radiation therapy, the authors suggest that this less invasive treatment option should be considered for this patient population.

■ Does age matter in selection of treatment for men with early-stage prostate cancer? A Konski, D Eisenberg, E Horwitz, et al. *Cancer*, published online 8 May, doi:10.1002/cncr.21923

Biomarker predicts spread of kidney tumours

➜ Lancet Oncology

A biomarker whose presence can be identified through a simple, inexpensive and reliable test has been found to identify kidney tumours that are most likely to spread to the rest of the body.

As part of a programme to develop biomarkers for clinical use, Zhong Jiang and colleagues, of the University of Massachusetts, Worcester, USA, studied the expression of the protein IMP3 in 501 patients with primary and metastatic renal-cell tumours. They then further studied 371 of these patients who had localised primary tumours to see whether their cancer had spread. The researchers found that the presence of IMP3 was significantly increased not only in metastatic renal cell tumours but also in primary tumours that later developed metastases: patients with IMP3-positive primary tumours were almost six times more likely to subsequently develop metastasis and four times more likely to die than were those with IMP3-negative tumours, even after adjustment for other well-known clinical variables.

"Tumour metastasis, the spread of cancerous cells from an original site to elsewhere in the body, is almost always deadly news," said Jiang, "early detection and treatment of these patients with a high potential to develop metastasis is crucial for the survival of cancer patients."

At present, 'watchful waiting' is the standard of care for patients with localised kidney cancers that have been removed by surgery. The authors suggest that, with the use of the IMP3 test, patients with early-stage disease and a high potential to develop metastasis after surgery can now be identified and offered additional treatment.

■ Analysis of RNA-binding protein IMP3 to predict metastasis and prognosis of renal-cell carcinoma: a retrospective study. Z Jiang, PG Chu, BA Woda, et al. *Lancet Oncology*, July, 7:556–564

Two follow-up CT scans are adequate for some testicular tumours

➜ Journal of Clinical Oncology

Computed tomography (CT) scans are an important part of surveillance for men after surgery (orchiectomy) for stage I non-seminomatous germ cell tumours (NSGCT) of the testis. Because CT scans are costly and deliver a substantial amount of radiation to the body, researchers have been interested in determining the minimum number of post-operative CT scans needed to safely follow patients.

New data from a study presented at ASCO 2006 suggest that two post-operative CT scans are as safe for detecting relapse as five scans. Investigators from the UK's Medical Research Council randomly assigned 414 patients who elected to have only surveillance after surgery to follow-up routines containing either two CT scans (247 patients at 3 and 12 months after surgery) or five CT scans (167 patients at 3, 6, 9, 12 and 24 months after surgery). All other surveillance tests were performed with equal frequency between groups during monthly follow-up visits during the first year, every other month during the second year, and every 3 to 6 months thereafter. At a median follow-up of 40 months, the investigators had detected 37 relapses (15%) in the two-CT group and 33 (20%) in the five-CT group. Recurrent tumours were approximately the same size at detection in both groups. "There is no clear advantage to more frequent CT scans in follow-up" of these patients, stated GM Mead, of the Mount Vernon Cancer Centre in Middlesex, England. "The two-CT-scan schedule can be considered a new standard."

■ Medical Research Council trial of 2 versus 5 CT scans in the surveillance of patients with stage I non-seminomatous germ cell tumours of the testis. GM Mead, GJ Rustin, SP Stenning, et al. *J Clin Oncol* 20 June, 24(18 Suppl):4519

New research may help identify individuals at risk of skin cancer

➜ Journal of Clinical Oncology

US researchers have developed a new scientific model to help identify individuals who have an increased risk of developing melanoma.

The number of people developing the disease is rising, and it is most prevalent in young adults. The risk factors are complex and include family history, skin type, the use of sun lamps and exposure to sunlight. Monitoring those with an increased risk of the disease could help to identify cases earlier and reduce the number of deaths.

The study analysed data from more than 700 white non-Hispanic patients with invasive melanoma recruited from melanoma clinics in Philadelphia and San Fransicso and more than 900 control subjects from similar catchment areas.

All participants were interviewed and given thorough skin examinations. This information was combined with incidence and mortality rates in the US and used to determine the risk of developing melanoma within five years.

The relative risk models showed an attributable risk of 86% for men and 89% for women, using at most seven variables. Attributable risks did not vary by age, exposure to ultraviolet B or the amount of time spent outdoors. Absolute individual risk varied widely, depending on age and geographic area. The study suggests that the risk factors can be put into two broader categories: individual interaction with sunlight and the number of moles present at a particular time in the participant's life.

This new predictor for skin cancer is based on a successful model used to calculate the risk of breast cancer. The new information can help identify those at risk of developing melanoma so that they can undergo skin examinations and counselling and be made aware of the increased importance of avoiding sun exposure. It will also be valuable in designing clinical trials in order to select participants who are more likely to develop melanoma.

The accompanying editorial comments, "Overall, this article represents an important and seminal contribution to the field of cancer control."

■ Identifying individuals at high risk of melanoma: a practical predictor of absolute risk. TR Fears, D Guerry IV, RM Pfeiffer, et al. *J Clin Oncol*, published online 25 May, doi: 10.1200/JCO.2005.04.1277

Type of Hodgkin disease can influence prognosis

➜ Cancer

Regional differences in the survival of Hodgkin disease (HD) can be partially explained by the type of the disease, according to a new population study. The study showed that a type of HD known as nodular sclerosis was much more common in the US than in Europe, and that there is significantly more variability in the types of HD found across Europe. Differences in type of HD accounted for differences in survival between the US and most of Europe, with Eastern Europe being the exception.

HD is a malignancy of the lymphatic system of the body, which includes lymph nodes and the spleen. Like many cancers, there are different types of HD, and studies have shown that certain types have worse prognoses. However, treatment regimens, particularly the newer generation of chemotherapy and radiotherapy, are generally successful at curing the disease. Despite this, a recent study of European cancer registries showed significant geographic differences in the survival of blood-borne cancers, such as HD.

In order to understand the causes of these regional differences, Claudia Allemani from the Istituto Nazionale per lo Studio e la Cura dei Tumori in Milan, and the EUROCARE Working Group compared 6,726 cases from 37 cancer registries in Europe (EUROCARE-UK, EUROCARE-West, and EUROCARE-East) and 3,442 cases from 9 US (SEER – Surveillance, Epidemiology, and End Results) registries diagnosed between 1990 and 1994 and followed for at least five years.

Analysis showed that the distribution of HD types in a region was a major factor in determining regional differences in HD five-year survival and risk of death. In the model that was adjusted by age, gender and years since diagnosis, the relative excess risk (RER) of death (relative to the SEER data) was 0.93 in EUROCARE-West, 1.15 in EUROCARE-UK, and 1.39 in EUROCARE-East. When the model was also adjusted for type of HD, EUROCARE-UK and SEER no longer differed (RER 1.06). However, the type of HD did account for the differences in mortality risk between cases in the EUROCARE-UK and EUROCARE-East regions.

Even after the type of HD was adjusted for, mortality risk remained significantly increased in EUROCARE-East compared to EUROCARE-UK, suggesting factors other than HD morphology, such as stage of disease at diagnosis and treatment, influenced outcome.

The study also confirmed the conclusions of previous research that HD tumours with lymphocytic predominance have an excellent prognosis and HD tumours with lymphocytic depletion are associated with significantly worse outcomes.

Allemani and her colleagues conclude, "Differences in excess risk of death between the geographic regions diminished when corrected for morphology, indicating that differences in morphologic case mix are an important determinant of regional survival differences for HD."

■ Hodgkin disease survival in Europe and the US. Prognostic significance of morphologic groups. C Allemani, M Sant, R De Angelis, et al. and the EUROCARE Working Group. *Cancer*, published online 12 June, doi: 10.1002/cncr.21995