

GLOSSARY

CNS

Central nervous system

BRACHYTHERAPY

The use of sealed radioactive sources placed close to the target tissue

Risk of brain tumors in metastatic breast cancer

Although CNS involvement is rare in early metastatic breast cancer, brain tumors are a common feature of late metastasis and are associated with poor survival. Evans and colleagues from the Nottingham Breast Institute, UK, recently proposed that early intervention might lead to improved survival and quality of life. They set out to characterize brain metastases in breast cancer patients and to identify women at greatest risk.

The records of 219 deceased women with metastatic breast cancer at 70 years of age or younger were used to determine the type, frequency and age of onset of brain tumors, the pathology and estrogen-receptor (ER) status of the primary tumor, and length of survival.

Brain metastases were recorded in 49 patients (22%), 38 of whom had multiple intracerebral lesions. Analysis of data relating to ER status and age of presentation with brain metastases enabled Evans *et al.* to identify a group of women who had a higher risk (53%) of developing brain tumors: those <50 years old with ER-negative breast cancer. In contrast, there was a 12% risk for women \geq 50 years old with ER-positive cancer. There was no association between primary-tumor pathology and development of brain cancer. As brain metastases could develop only in women who lived after responding to treatment, it appeared that women with brain metastases lived longer than women without.

The authors conclude that high-risk patients may benefit from pre-emptive management, such as prophylactic treatment or screening.

Original article Evans AJ *et al.* (2004) Brain metastases from breast cancer: identification of a high-risk group. *Clin Oncol* 16: 345–349

Brachytherapy for cervical cancer

BRACHYTHERAPY is widely used, in combination with external beam radiotherapy (EBRT), in the treatment of cervical cancer. It is unclear, however, whether high-dose-rate (HDR) brachytherapy is superior to the more traditional low-dose-rate (LDR) approach in terms of tumor control and complication rate. Lertsanguansinchai and colleagues have recently reported on a prospective, randomized trial comparing the two approaches.

Women with previously untreated, invasive cervical cancer were randomized into two brachytherapy groups, LDR and HDR. All patients were also treated with EBRT in an integrated procedure. Survival, tumor control and complication rates were compared between the two brachytherapy groups.

Median follow-up was for 40.2 months in the LDR group ($n = 109$) and 37.2 months in the HDR group ($n = 112$). The overall survival, relapse-free survival and pelvic control rates were similar in the two groups. Complications (affecting the rectum, bladder and small bowel) also occurred at similar rates. There was a relatively high rate of distant metastases in both groups and the authors suggest that alternative treatment modalities should be considered, particularly for Stage IIB and IIIB patients.

In conclusion, HDR brachytherapy was clinically comparable to LDR brachytherapy in this study. Although the optimum dose-fractionation schedule remains to be determined, HDR brachytherapy may offer benefits including improved patient convenience and reduced exposure of staff to radiation.

Original article Lertsanguansinchai P *et al.* (2004) Phase III randomized trial comparing LDR and HDR brachytherapy in treatment of cervical carcinoma. *Int J Radiat Oncol Biol Phys* 59: 1424–1431

Bone complications in prostate cancer

Androgen deprivation therapy (ADT), often using luteinizing hormone-releasing hormone (LHRH) agonists, is common in the treatment of progressive prostate carcinoma. The resulting therapeutic hypogonadism is suspected, however, of further increasing the risk of bone complications. Krupski and colleagues have recently reported on their large, longitudinal study of the natural history of bone complications in men receiving ADT for prostate carcinoma.

A random 5% sample was taken of all US Medicare claims made in 1992–1994. This included records of 4,494 men aged 65 years or over, who had initiated ADT for prostate carcinoma during this period. Bone complications, namely osteopenia/osteoporosis, pathologic fractures and nonpathologic fractures, were assessed in these men throughout the 7-year follow-up. The longest-surviving quartile of