Thorough cancer surgery may make radiation unnecessary

Scott Gottlieb, *New York*

Women who undergo localised breast surgery for the removal of a common form of non-invasive breast carcinoma may have their need for follow up radiotherapy eliminated if surgeons remove an extra centimetre of tissue around the cancer, according to a new study (*New England Journal of Medicine* 1999;340:1455-61). Ductal carcinoma in situ, an abnormal growth of cells inside milk ducts that is non-invasive and unlikely to recur if completely excised, was studied.

Dr Melvin J Silverstein (at the University of Southern California School of Medicine) and colleagues followed 469 women

with the cancer who were treated at two California facilities between 1972 and 1998. Just under half of them had no follow up radiotherapy.

Among women whose lumps were removed along with a 1 cm margin of tissue, about 97% had no recurrence of cancer. When used, radiotherapy did not reduce recurrence rates. The study found that radiotherapy benefited only women who had had 1 mm or less of extra tissue removed around the cancer.

Up to 80% of patients with ductal carcinoma in situ are eligible for lumpectomy rather than complete breast removal. Medical opinion has been divid-

ed on whether radiotherapy is necessary for all patients with this type of cancer who have chosen to have a lumpectomy.

The new findings suggest that there is a trade off: having more tissue removed might alter or disfigure the breast but may also eliminate or delay the need for follow up radiotherapy.

Dr Carolyn Kaelin, director of the Comprehensive Breast Health Center at Boston's Brigham and Women's Hospital, said that the pathologists taking part in the study had used a meticulous procedure to measure how much tissue was removed from around the cancer. But in cases in which this

approach is not adopted hospitals may not feel confident advising women not to have radiotherapy.

In an accompanying editorial (*New England Journal of Medicine* 1999;340:1499-1500), Drs David L Page and Jean F Simpson of the Vanderbilt University School of Medicine in Nashville, Tennessee, said: "What the report does not establish is that the excised lesion should have a 1 cm margin in all cases of ductal carcinoma in situ that are amenable to cure by local excision.

"This conclusion would be as overly simplistic and restrictive as the paradigm it is replacing." □

Children who sleep with light on may damage their sight

Alison Tonks, *BMJ*

Small children and babies who sleep with the light on are more likely to grow up shortsighted than children who sleep in the dark, a team of US researchers reported last week.

A study of 479 children aged between 2 and 16 years shows that children who sleep with a room light on before the age of 2 are five times more likely to be shortsighted than children who sleep in the dark. Night lights were also linked to short sight but not as strongly as full overhead lighting.

"Our findings suggest that the absence of a nightly period of full darkness in early childhood may be an important risk factor in the development of nearsightedness," said Richard Stone, senior investigator and professor of ophthalmology at the Scheie Eye Institute in Pennsylvania.

"The study does not establish

that night time lighting during early childhood is a direct cause of myopia ... still, it would seem advisable for infants and young children to sleep at night without artificial lighting in the bedroom until further research can evaluate all the implications of our results."

The findings, published in *Nature* (1999;399:113), were based on a survey of children attending an ophthalmology clinic at a US tertiary referral centre.

Parents filled in a questionnaire exploring the child's current and past exposure to light, including lighting at home, at day care, and at school. Parents were also asked whether their child wore sunglasses.

A clear and dose dependent association between night time lighting in early childhood and short sight emerged. One tenth of children who slept in dark-

Should young children sleep without artificial lighting?

ness had myopia compared with 34% of children who slept with a night light on and 55% of children who slept with a full light on. The results are statistically significant at the 5% level and are adjusted for age.

Critically, the researchers found no link between current night time lighting and sight problems.

The study was done against a background of an increasing

prevalence of myopia.

The researchers warned that their results were not conclusive and should be treated with caution until bigger and better prospective studies are done. For example, they were unable to rule out confounding by parental shortsightedness. Shortsighted parents may be more likely to light their children's bedrooms and are certainly more likely to have shortsighted children. □