

In the news

CHEMO BRAIN IMAGED

The subtle memory changes some cancer patients suffer after chemotherapy ('chemo brain') might be caused by real changes in brain metabolism.

The brains of 24 women who had been treated for breast cancer were imaged using positron-emission tomography to measure blood flow to different areas of the brain during short-term memory tests. The study, published in *Breast Cancer Research and Treatment*, "represents the first direct look at brain metabolism associated with these chemo brain problems," said Daniel Silverman, the lead author of the study at the University of California, Los Angeles (<http://www.webmd.com>, 5 October 2006).

Comparing the scans of 16 women treated with surgery and chemotherapy with scans from 5 who had surgery only and 13 control subjects, the researchers found lower metabolism in part of the frontal cortex in women with chemo brain symptoms. These women also had increased blood flow to the frontal cortex and cerebellum, indicating a leap in activity. "These women's brains were working harder than the control subjects", said Silverman (<http://www.reuters.com>, 5 October 2006).

Silverman notes that although "the impact tends to be relatively subtle ... chemo brain symptoms are the single biggest impediment to the quality of life of long-term breast cancer survivors" (<http://www.forbes.com>, 5 October 2006).

However, the study compared different women, not the same women before and after chemotherapy. Furthermore, "other things also affect cognition including age, level of intelligence, menopausal status, and mood state," said Valerie Jenkins at Cancer Research UK (<http://news.bbc.co.uk>, 6 October 2006).

"We can show the correlation," Silverman said, but the mechanism is "still a mystery that's being explored by us and others" (<http://www.webmd.com>, 5 October 2006).

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