

**EMBARGOED FOR RELEASE UNTIL 2:00 P.M. CT/3:00 P.M. ET, TUESDAY, APRIL 15, 2008**

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AAN Press Room 179B (April 12–18): (312) 791-7053

## **Chemotherapy May Not Affect Memory in Breast Cancer Patients**

**CHICAGO** – Women receiving chemotherapy for breast cancer frequently report problems with memory and concentration, but two new studies suggest that chemotherapy is not the cause of these problems, and the stress of the diagnosis may be. The studies will be presented at the American Academy of Neurology 60<sup>th</sup> Anniversary Annual Meeting in Chicago, April 12–19, 2008.

“This is an important issue, particularly as survival rates for breast cancer improve,” said study author David G. Darby, MD, chief medical officer of CogState Ltd., an Australian company that developed the cognitive tests used in the studies. “People could be making decisions about whether or not to have chemotherapy based on stories they’ve heard about ‘chemofog’ or ‘chemobrain.’ Hopefully this information will help people make informed decisions.”

For Darby’s study, 30 women with breast cancer were given cognitive tests before each cycle of chemotherapy and again one month after the final cycle. They were compared to 30 healthy women who were also tested five times about a month apart.

The women with breast cancer had slight problems in attention and learning skills before chemotherapy started. Chemotherapy resulted in only a minor slowing in thinking speed. Three women, or 10 percent, developed cognitive problems during chemotherapy.

“We also found that the women who reported that they had problems with memory, concentration and other cognitive skills were not actually the ones who developed problems as determined by the tests,” Darby said.

The second study compared three groups of women: 40 women with breast cancer who had not yet received chemotherapy or radiation; 27 women who had recently had a breast biopsy that was benign, or not cancerous; and 20 breast cancer survivors who had completed treatment at least one year before. All of the women were tested on their cognitive abilities and evaluated for anxiety, depression, their overall quality of life and the amount of social support they had.

On tests of working memory and spatial learning, the women recently diagnosed with breast cancer performed about the same as the women with the recent benign biopsy. However, both groups were slower and less accurate than the breast cancer survivors. In addition, CogState measures of memory and learning for the breast cancer patients did not significantly diminish during the initial stages of treatment.

The recently diagnosed women who had better overall quality of life also had better scores on the cognitive tests.

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“These results suggest that cognitive difficulties experienced by women with a new breast cancer diagnosis may be related to stress as a result of the diagnosis and other quality-of-life factors, and not simply due to the effects of chemotherapy or radiation,” said study author Michael J. Boivin, PhD, MPH, of Michigan State University.

Boivin’s study was supported by the Templeton Advanced Research Program of the Metanexus Institute.

Darby’s study was supported by CogState Ltd., the University of Melbourne, and the Peter MacCallum Cancer Centre.

The American Academy of Neurology, an association of over 21,000 neurologists and neuroscience professionals, is dedicated to improving patient care through education and research. A neurologist is a doctor with specialized training in diagnosing, treating and managing disorders of the brain and nervous system such as Alzheimer’s disease, epilepsy, multiple sclerosis, Parkinson’s disease, and stroke.

For more information about the American Academy of Neurology, visit [www.aan.com](http://www.aan.com).

**Editor’s Note:** Dr. Darby will present his research during a scientific platform session at 2:00 p.m. CT/3:00 p.m. ET, on Tuesday, April 15, 2008, in Room 176 of the McCormick Place West Convention Center. Dr. Boivin will present his research during a scientific poster session at 6:00 p.m. CT/7:00 p.m. ET, on Tuesday, April 15, 2008, in the Exhibit Hall.

Dr. Darby and Dr. Boivin will be available for media questions during a briefing at 11:00 a.m. CT/12:00 pm. ET, on Monday, April 14, 2008, in the on-site Press Interview Room, room 182.

If you are a member of the media interested in listening to the press briefing via conference call, please call the AAN Press Room (April 12 – 18) at (312) 791-7053.

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