SINGAPORE, 13 Nov 2004 (Deutsche Presse-Agentur) – A Singapore-developed computer chip the size of a coin tests for early signs of breast cancer before lumps are noticed, researchers said on Thursday.

"The chip helps look for cancer markers from the person's genetic material," said Dr. Gao Zhiqiang, principal research scientist at the Institute of Bioengineering and Nanotechnology.

He and his colleagues said they hope to pack the chip, which costs 10 Singapore dollars (5.70 U.S.), into a biosensor about the size of a mobile phone.

It should be available in two years and pave the way for doctors to conduct breast cancer tests in their clinics.

A patent for the chip has been filed in the United States.

Biosensors are electronic devices that screen genetic material for information on medical conditions or diseases.

The sensor requires only a tiny tissue sample to determine signs of a cancer's presence, and would be able to do so long before any lump is noticed, Gao said.

About 700 to 1,000 new cases of breast cancer are diagnosed here each year, the most common form of cancer among women.