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SUST researchers invent low-cost cancer detection technology

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Education minister Nurul Islam Nahid addresses a news conference at International Mother Language Institute in Dhaka on Wednesday on invention of a new technology by Shahjalal University researchers to diagnose cancer in five minutes. — New Age photo

Bangladesh researchers on Wednesday said that they invented a mechanism for detecting cancer through blood test in five minutes with a cost of about Tk 500 while existing diagnosis of cancer was a long, costly and challenging process.

The researchers from Shahjalal University of Science and Technology in Sylhet made the claim at press conference in Dhaka, saying that they applied for a patent in the United States and Bangladesh on the invention titled 'Method and system based on nonlinear optical characteristics of body fluids for diagnosis of neoplasia.'

Higher Education Quality Enhancement Project and University Grants Commission jointly organised the press conference at International Mother Language Institute.

Education minister Nurul Islam Nahid and University Grants Commission chairman Abdul Mannan said that the simpler invention was a great achievement for the university and the country.

Nahid said that now a patient had to spend Tk 8000-10,000 for the detection of cancer through lab tests that took 6/7 days.

‘With the new invention, cancer detection will require few minutes and less than Tk 500,’ he said.

Lead researcher of the group SUST physics professor Yasmeen Haque said that the technology-enabled device would be ready within a year.

She said that the phenomena of nonlinear optical phase changed when a sufficiently high laser beam passed through the blood serum yielded a characteristic nonlinearity parameter value.

This noninvasive method of obtaining blood sample leads to nonlinear optics-based methods for non-destructive quick diagnosis of cancer, she said.

The invention was made as part of the project titled ‘Innovative Biomarker Detection System Using Nonlinear Optics’ under Higher Education Quality Enhancement Project under the grants commission with funds provided by the government and the World Bank.

A group of 25 researchers has been working in the project since 2016.

The researchers said that they also invented a disposable and recycled sample holder with a cost less than Tk 500 which now cost about Tk 27,000. The group has also applied for patent on the sample holder and specific frequency that can detect cancer.

They are also making a prototype of a low-cost machine that would help medical practitioners to detect cancer quickly. ‘We will also apply for a patent on the machine,’ said group member Manash Kanti Biswas.

‘We are already using the sample holder. We will be able to prepare the machine in about one year’ he said.

SUST physics professor Sharif Md Sharafuddin, another researcher, said that generally cancer was detected in late stage but with the mechanism the life threatening disease could be detected at early stage.

Yasmeen and Manash said that they did not go for publication in national and international journals as they applied for patent. They also said they planned to make publications on their invention.



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