

## **DBT-NIBMG scientists working on early detection of Pancreatic cancer**



(Campus of DBT-NIBMG, Kalyani, West Bengal)

New Delhi, May 19: Pancreatic cancer is one of the most aggressive cancers having a high mortality rate. One of the reasons for this is that the disease is asymptomatic at early stages. Most of the time early symptoms are only abdominal pain or discomfort, loss of appetite, fatigue etc. which could be confused with other mild diseases.

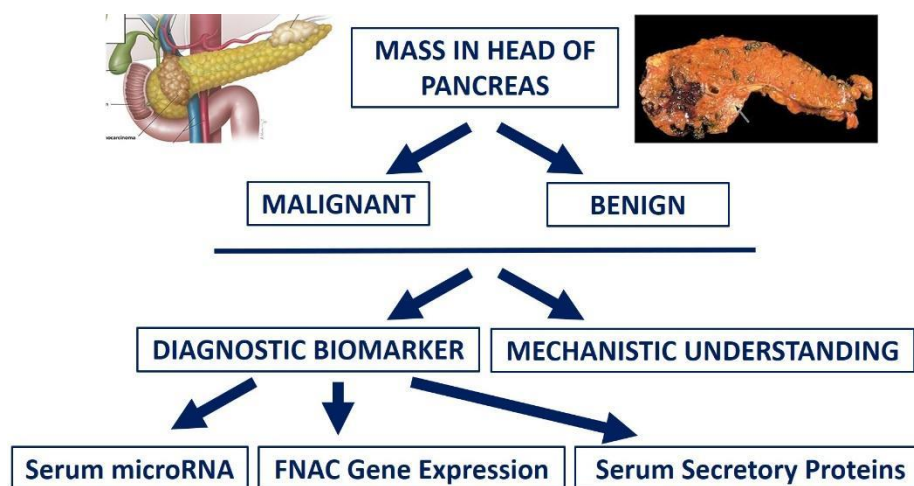
As the pancreas is located deep in the abdomen, it is also not possible for the clinicians to feel any changes in the organ physically. As a result, when the disease is finally diagnosed due to severe continuing abdominal pain or jaundice, it would have reached a very advanced stage with very little chance of cure. Therefore, there is a need for an early detection biomarker which could detect the disease at an early stage.

Dr. Srikanta Goswami and his team at the Department of Biotechnology's National Institute of Biomedical Genomics (DBT-NIBMG) at Kalyani, West Bengal, who work on pancreatic diseases with the main focus on pancreatic cancer, is investigating whether a class of small RNAs called microRNAs could be used as an early detection biomarker of pancreatic cancer by measuring their amounts in the blood from high-risk individuals at an early stage.

Another aspect about the disease is that the tumour is generally formed at the head of the pancreas and appears as a mass in that region of the organ. Incidentally, there are pre-malignant inflammatory conditions which also manifest with a mass in the pancreatic head. Unfortunately, existing blood tests or imaging tests are unable to confidently distinguish

between these two types of pancreatic head masses. When a patient comes with a pancreatic head mass to the clinic, clinicians perform surgery in almost all the cases due to the difficulty in distinguishing between benign and malignant mass.

The surgery of pancreas is highly complicated and is associated with a high risk. Hence, proper diagnosis of benign and malignant head mass of pancreas is very essential, as the subsequent treatment largely depends on the diagnosis. Dr. Goswami and his team are consequently working to discover potential biomarkers which could distinguish between benign and malignant head masses accurately. They have identified a pattern in six genes capable of doing so. They are now undertaking further research to elucidate the underlying mechanism of development of pancreatic cancer in individuals having chronic inflammation in pancreas or with high alcohol consumption.



**Publication:** Chhatriya B, Mukherjee M, Ray S, Sarkar P, Chatterjee S, Nath D, Das K, Goswami S; Comparison of tumour and serum specific microRNA changes dissecting their role in pancreatic ductal adenocarcinoma: a meta-analysis; BMC Cancer. 2019 Dec 3;19(1):1175. doi: 10.1186/s12885-019-6380-z.

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