

## **Risk factors for explored esophageal cancer**

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Researchers have made considerable progress in curing many cancers, and many now have reasonably good recovery rates. One, however, that is increasing dramatically is esophageal cancer. In fact, in the past 20 years, its rate of increase has been greater than that of any other solid-tumor cancer. And, despite some advances in treatment, esophageal cancer has, Dr. Alan Casson reports, “a dismal prognosis.”

Esophageal cancer almost always emerges from a premalignant condition called Barrett’s epithelium. Although no causal link has ever been established, gastroesophageal reflux disease, the term used to describe a backflow of acid from the stomach into the esophagus, is generally considered a risk factor for Barrett’s epithelium.

Dr. Casson’s research is directed at finding a molecular basis for early detection, prevention and treatment of esophageal cancer. This particular project will follow 467 patients. It has two aims:

- to characterize changes in the p53 gene. The protein produced by this gene normally works to prevent cells from growing too much and helps to destroy cells with DNA damage too extensive for the cells to repair. Altered p53 can lead to increased growth of abnormal cells and formation of cancer. Recent studies suggest that tests to detect these p53 gene alterations may allow very early detection of some cancers; and
- to evaluate the importance of life-style risk factors, such as tobacco and alcohol use and obesity, in causing gastroesophageal reflux disease, Barrett’s epithelium, and esophageal cancer.

After the first 12 months, Dr. Casson has preliminary data that indicates that a high consumption of fruit, vegetables, fibre, and antioxidant vitamins may reduce the risk of esophageal cancer, Barrett’s epithelium, and gastroesophageal reflux disease. The preliminary research also indicates that obesity is a risk factor for all three diseases.

Dr. Casson’s research will continue looking for a way to diagnose esophageal cancer earlier and more easily.

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