Speaker 2: Hi, my name is Emmanuel Nidhiry. I'm a medical oncologist and hematologist practicing at the Ephraim McDowell Commonwealth Cancer Center in Danville.

Well, pancreatic cancer is one of the leading causes of cancer-related mortality in the United States. The incidents of pancreatic cancer seem to be increasing over the past few years. The risk factors for pancreatic cancer include advanced age, obesity, smoking - which account for 25% of the cases of pancreatic cancer, and the risk seemed to go down when you quit smoking. Then, there are some incidents of exposure to certain dyes with dry cleaning. The new-onset of diabetes sometimes can be associated with pancreas and patients with diabetes do have an increased risk of pancreatic cancer, in general. African American ethnicity seems to be associated with increased risk of pancreatic cancer. About 10% of the pancreatic cancer could be part of the inherited cancer syndrome, but the vast majority of the cases are sporadic and associated with some of these risk factors.

There is a minority of cases, like five to 10% of cases of pancreatic cancer, can be associated with various inherited cancer syndromes, and also, it is associated with the condition called familial pancreatitis, where there is increased risk of chronic inflammation of the pancreas as well as risk of developing pancreatic cancer, and this is associated with a gene called PRSS1.

Pancreatic cancer is difficult to diagnose in early stages since the pancreas is located deep inside the abdomen, surrounded by other organs, including the small bowel. The signs and symptoms can be non-specific including abdominal discomfort, especially in the midline. It can present with jaundice, weight loss, lack of appetite, and sometimes could be associated with new-onset diabetes.

So the commonest type of pancreatic cancer is adenocarcinoma and adenocarcinomas account for 90% of the pancreatic cancers. And it arises in that exocrine or digestive portion of the pancreas. Part of the cancers that involved endocrine portion are typically called insulinomas are other rare tumors. And typically they are managed differently. Staging wise, you go by the TNM staging. In general, stage one and two is confined to the pancreas. Stage three means there is involvement of the lymph nodes and stage four means it is involving other organs in the body.

The treatment options for pancreatic cancer have been improving over the past decade. There have been improvement in surgical techniques, as well as increased utilization of combination chemotherapy along with surgery to increase a chance of dissecting the tumor or removing the tumor surgically. This increases the chance of cure. There has also been improvement in systemic treatment options, including more effective combination chemotherapy, common treatments like Folfirinox and Gemcitabine Abraxane regimens, and more cancers are being identified, which could potentially be treated with newer modalities like immunotherapy and targeted therapies. Radiation treatment also has a role in certain cases of pancreatic cancer, especially to try to shrink the tumor size prior to surgery.

It is curable in early stages. If they have a stage one or two pancreatic cancer, meaning the cancer is confined to the pancreas, there is about a 40% chance of curing the cancer with treatment. But that rate of cure goes down when there is spread to the lymph

nodes. In which case the five-year survival, it's only like 13%. And when it spreads outside of the local area, the five-year survival drops to like less than 5%. So it is very difficult to treat if it has become more advanced, that is why it's important to have it diagnosed early as possible.

There's no universal screening test for general population, since it is relatively less common cancer, it affects only like one in 64 individuals during their lifetime. But if you do have a family history of different cancers, it is important to discuss with your doctor about testing for any known inherited cancer syndromes that could put you at risk for pancreatic cancer. If you happen to have a gene mutation that puts you at risk of pancreatic cancer, screening techniques like endoscopic ultrasound or MRI or CT imaging could help in detecting the cancer in an early stage. Even though pancreatic cancer, especially in the advanced stages, remain difficult to treat, there has been significant improvements being made in the treatment options, including surgical techniques and newer combination chemotherapy treatments, as well as newer immunotherapy and targeted therapy options. And these treatment options are being refined with clinical trials each year. So even though it is a difficult disease to treat, the prognosis seem to improve modestly each year with the development of new treatments.