What is resectable pancreatic cancer?

Both the National Comprehensive Cancer Network (NCCN) and the American Joint Commission on Cancer (AJCC) staging systems suggest that the definition of “resectable” pancreatic cancer is straightforward. However, determining whether a patient is eligible for surgical resection actually requires some fairly complex medical decision-making.

According to the cancer staging systems, “resectable” pancreatic cancers are, first and foremost, those that are not associated with disease outside the pancreas. The reason for this is that the outcome following surgery—even if all disease can be removed—is not associated with a longer lifespan or better quality of life than that associated with chemotherapy alone when there is disease in sites such as the liver or lung. Simply put: patients with any amount of disease outside the pancreas live longer and better without surgery. This is a fact that neither I, nor any other pancreatic oncologist, would dispute. However, the anatomic extent of disease that constitutes “resectable” cancer among patients with cancers localized to the pancreas is more controversial.

The anatomic extent of the primary cancer is evaluated primarily by CT scan, and determining “resectability” essentially involves determining the relationship between the primary tumor and adjacent blood vessels. Small tumors that do not involve any major blood vessels are almost always considered “resectable” from an anatomic perspective. In contrast, until recently, tumors that appeared to involve any of the major abdominal blood vessels were considered unresectable because survival following surgical procedures that required resection and reconstruction of these vessels was poor.

However, surgeons have now refined their techniques to the point that often, these vessels can be removed safely and with good long-term outcomes. In many major pancreatic treatment centers, tumors may be removed even when they involve the portal vein (the major vein that connects the small intestine and liver) or even the hepatic artery (the artery that supplies blood to the liver). In patients with cancers that involve these vessels, the surgeon will often offer treatment with chemotherapy. However, it is important to recognize that not all pancreatic treatment centers consider tumors that involve blood vessels resectable, and not all surgeons will perform the operations required to remove such cancers, even following non-operative therapy. Therefore, it is important to discuss overall plans and the treatment philosophies of the medical team prior to the initiation of any treatment.

The anatomy of the tumor is not the whole story. Other patient-related factors are equally as important to the decision-making process. Foremost among these include comorbidities and functional status. Comorbidities refer to other ailments that the patient may suffer from, such as heart disease or diabetes. Functional status is a nebulous term that refers to things like strength, vitality and the ability to function independently. An assessment of these factors is critical to determine whether or not a patient has a resectable cancer, because it requires a great amount of strength to get through a major pancreatic resection.

Another consideration is the CA19-9 level. This is a circulating “tumor marker” that can give a
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ballpark figure of the amount of cancer in the body. A low CA19-9 level is, in general, better than a high level. But there are several caveats. Some patients don’t make CA19-9 at all, and therefore it can’t be measured in the blood. CA19-9 is also influenced by jaundice, and so blood levels of the marker are almost impossible to interpret in the presence of yellow skin. Also, other cancers can falsely elevate levels of CA19-9. So, all in all it’s not a perfect marker of disease burden. But, it is important in the determination of resectability because a high level can indicate the presence of disease hiding far from the pancreas, even when it is not visible on CT scan. CA19-9 is therefore considered when deciding whether or not a patient is appropriate for surgery.

So a final determination of resectability requires a complex evaluation of tumor anatomy, age, comorbidities, functional status and the results of a blood test to determine the risk-benefit profile of surgery. This evaluation may take more than one outpatient visit to complete.

When it comes down to it, there are several treatment options available to patients with pancreatic cancer, of which surgery is only one. Surgery makes good sense when the risks associated with surgery are low and the anatomic extent of disease in the body is limited. Surgery becomes a less attractive treatment option as risk of surgery increases (due to older age, or the presence of multiple other medical problems, for example) or as the anatomic extent of the cancer grows. In the latter situation, chemotherapy or chemoradiation are better choices.