

2.1 Diagnosis and Clinical Staging of Pancreatic Cancer

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Introduction

Pancreatic ductal adenocarcinoma, the most common malignancy of the exocrine pancreas, is the 4th and 5th most common cause of cancer-related deaths in men and women respectively and the 2nd most common cause of death due to gastrointestinal malignancy. Almost all of the 30000 newly diagnosed patients with this disease in the USA next year will eventually succumb to it; only 10–15% will be determined to have resectable disease preoperatively, which will prove true in only half of them. This last decade has been marked by a tremendous decrease in morbidity and mortality after major pancreatic resections (1). Currently, in centers of excellence with a major interest in pancreatic surgery operative mortality is consistently < 5% and also there is evidence of higher 5-year survival after resection, with actuarial or actual survivals around 12–24% (2–6) that may be even higher in certain subgroups of patients (4, 5, 7).

This definite and consistent improvement has shifted the attitude of experienced surgeons towards major pancreatic resections. Despite past nihilism and even some current pessimistic views that may involve cost awareness (8), it is unequivocal that surgery offers the only possibility for cure of this dread disease at the expense of very significantly decreased perioperative complications. Thus, the pancreatic surgeon of the late 1990's approaches a periampullary tumor in a much more aggressive and confident way. The hesitation to operate, the low willingness to embark on a pancreatectomy unless tissue diagnosis was available, the exhaustion of every diagnostic means to rule out conditions which would not absolutely necessitate pancreatectomy (i.e.: chronic pancreatitis, periampullary adenoma) are now past. When faced with a pa-

tient with a symptomatic periampullary mass, today's pancreatic surgeon is more willing to embark on resecting it without precise tissue diagnosis and extensive work-up to identify its pathologic nature; rather he or she is much more concerned whether this mass is indeed resectable. This is very important to recognize because the question of the past "what this mass is?" (i.e.: precise diagnosis) is now replaced by the question "can I take it out?" (i.e.: preoperative clinical staging). Consequently, the way various tests are utilized has also changed.

With these provisions in mind, this chapter will 1) discuss the clinical characteristics and presentation of pancreatic cancer, 2) analyze the role of the various diagnostic and staging modalities, and 3) outline the author's approach and suggest an algorithm based on cost, efficacy, safety, and currently accepted concepts of management. Such topics as tumor markers and molecular biologic techniques will be discussed only briefly, as they are dealt with in great detail in other chapters in this book and as applying mostly to early diagnosis of subclinical tumors, rather than established symptomatic periampullary masses. On the contrary, topics such as computerized tomography, angiography, laparoscopy will be discussed in depth as they are extremely relevant to the appropriate and time- and cost-effective preoperative clinical staging. Again, it is important to note that diagnosis and staging will be discussed separately in the effort to emphasize the difference between these two concepts and allude to the fact that in the eve of the 21st century, where operative resection is so safe in experienced hands, *precise preoperative pathologic diagnosis of a periampullary tumor is less important than appropriate clinical staging.*