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Pancreatic cancer is the fourth biggest cause of cancer-related fatalities in the World and generally affects people in their sixth to eighth decades. Cigarette smoking, obesity, high alcohol intake and chronic pancreatitis are underlying risk factors. The majority of pancreatic carcinomas are ductal adenocarcinomas, frequently developed on the head of the pancreas. Due to the delayed emergence of clinical symptoms, the pathology is often detected in a late stage (e.g. epigastric pain, painless jaundice and weight loss). When the primary tumor is diagnosed, it has often already advanced to other organs, primarily the liver. Surgical excision is only achievable in around 20 percent of patients, therefore palliative care is generally the sole option. The most prevalent surgical procedure performed is pancreaticoduodenectomy (Whipple procedure). Survival rates at five years vary from 3 to 40% depending on the size, spread and resectability of the tumor. Imaging may sometimes detect tiny, possibly resectable pancreatic lesions. These lesions may be benign, premalignant or malignant. Pancreatic cystic lesions and pancreatic neuroendocrine tumors profit from special medical and surgical treatment. Screening is not conducted frequently, although it is advised for selected, high-risk patients.

Given the aggressive nature of pancreatic cancer, the current National Comprehensive Cancer Network (NCCN) recommendations advocate surgery plus chemotherapy or surgery and chemoradiation for all early-stage pancreatic cancer patients. In spite of these evidence-based recommendations, fewer than 20 percent of patients comply to the NCCN guidelines for multimodal treatment for stage I pancreatic cancer, and non-compliance is linked with poor overall survival.

The failure to treat pancreatic cancer is a continuous, but improving issue, with trends indicating an increase in the number of patients getting therapy over time. From 1995 to 2004, according to Bilimoria et al. 71.4% of patients with clinical stage I pancreatic cancer did not receive any kind of surgical resection. Recent research has shown that resection rates are higher (46 percent in community facilities and 62 percent in university facilities).

As an increasing proportion of patients have adequate surgical resection, fewer people fail to receive therapy. Studies indicate that up to 51 percent of patients who have resection never get adjuvant chemotherapy, which remains an issue. Prior research attributes less than 10% of undertreatment to patient refusal and less than 5% to comorbidity-related contraindications. Previous research has focused on finding non-cancer-related characteristics as the reason of omitted adjuvant chemotherapy, such as age, race, rural-urban status, geographic region, and facility volume.

Although it is evident that socioeconomic inequalities play a role in undertreatment of early-stage pancreatic cancer, final pathological findings after resection may also influence the choice to forgo adjuvant chemotherapy. The status of regional lymph nodes, the tumor's definite size, and its histologic grade are traits connected with prognosis, with negative lymph nodes, tumors measuring less than 2 centimeters in diameter, and well-differentiated histologic grade being linked to prolonged overall survival. Given the documented link between the pathologic traits and survival, there is worldwide concern that favourable histopathological findings may influence postoperative treatment recommendations in favor of avoiding adjuvant chemotherapy that conforms to guidelines for these patients. Currently, there is no data associating the final surgical pathology with rates of adjuvant chemotherapy after pancreatectomy.

In recent years, pancreatic surgery has progressed dramatically. In regard with this issue, we review the most important diagnostic entities of the pancreas, covering both neoplastic and non-neoplastic pathologies. We present correlations with other relevant disciplines to the practicing clinicians, in order to emphasize surgical advancements pertinent to the therapeutical approach. Mentioning Irinel Popescu's team efforts to implement the concept of artery-first approach for pancreato-duodenectomies at the beginning of hepato-pancreato-biliary surgery as an independent branch of general surgery, later spreading to all high-volume centers in the country, representing a turning point in the therapeutic tactic for patients with borderline resectable tumors. Moreover, we discuss the advancements in perioperative management of patients with pancreatic cancer, utilized in a standard manner, incorporating physical, nutritional and organic rehabilitation, in order to further decrease complications, culminating with minimally invasive alternative options of treatment in non-resectable tumors. We discuss benign pancreatic diseases, such as acute and chronic pancreatitis, and further correlations regarding benign tumors. The attention is then shifted to additional pathologic tests performed on the pancreas, either cytopathology, cyst fluid analysis or molecular tests and cell division rate, an area that has made significant strides in recent years. We progress the discution on addressing technical challenges and expend recommendations, to improve surgical outcome and, consequently, quality of life.

Therefore we thank you for your interest in this special issue of the journal, which provides quality manuscripts and up to date work.

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