Addressing the challenges of pancreatic cancer: future directions for improving outcomes.

Abstract:
Pancreatic ductal adenocarcinoma (PDAC), which accounts for more than 90% of all pancreatic tumours, is a devastating malignancy with an extremely poor prognosis, as shown by a 1-year survival rate of around 18% for all stages of the disease. The low survival rates associated with PDAC primarily reflect the fact that tumours progress rapidly with few specific symptoms and are thus at an advanced stage at diagnosis in most patients. As a result, there is an urgent need to develop accurate markers of pre-invasive pancreatic neoplasms in order to facilitate prediction of cancer risk and to help diagnose the disease at an earlier stage. However, screening for early diagnosis of prostate cancer remains challenging and identifying a highly accurate, low-cost screening test for early PDAC for use in clinical practice remains an important unmet need. More effective therapies are also crucial in PDAC, since progress in identifying novel therapies has been hampered by the genetic complexity of the disease and treatment remains a major challenge. Presently, the greatest step towards improved treatment efficacy has been made in the field of palliative chemotherapy by introducing FOLFIRINOX (folinic acid, 5-fluorouracil, irinotecan and oxaliplatin) and gemcitabine/nab-paclitaxel. Strategies designed to raise the profile of PDAC
in research and clinical practice are a further requirement in order to ensure the best treatment for patients. This article proposes a number of approaches that may help to accelerate progress in treating patients with PDAC, which, in turn, may be expected to improve the quality of life and survival for those suffering from this devastating disease.