

28. Exocrine Pancreas

Authors

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Emerging Prognostic Factors for Clinical Care

Human equilibrative nucleoside transporter 1 (hENT1) plays an important role in transport of gemcitabine into tumor cells, and its expression in tumor cells is associated with increased survival in patients treated with gemcitabine but not with other drugs, such as 5-fluorouracil.¹ Expression of SPARC (secreted protein acidic and rich in cysteine) in the tumor and stroma also is a favorable prognostic factor in patients receiving gemcitabine as adjuvant therapy² and may be responsible for higher efficacy of nanoparticle albumin-bound (nab)-paclitaxel.³ Targeting the epidermal growth factor receptor (EGFR) pathway by cetuximab and the angiogenesis pathway by the vascular endothelial growth factor (VEGF) inhibitor bevacizumab and anti-HER2 antagonist trastuzumab so far has not yielded positive results.^{4,5} Clinical trials also have focused on other signaling pathways using insulin-like growth factor inhibitors, Hedgehog signaling pathway inhibitors, and Akt/PTEN/mTOR inhibitors, but success has been limited and better patient selection is necessary for future trials.⁵ Immunotherapies such as macrophage-directed therapy and cytotoxic T-cell-directed therapy have shown some promising results in preclinical studies, whereas others, such as tumor vaccines and interferon, have not shown favorable outcomes.⁵

Risk Assessment Models

The AJCC recently established guidelines that will be used to evaluate published statistical prediction models for the purpose of granting endorsement for clinical use.⁶ Although this is a monumental step toward the goal of precision medicine, this work was published only very recently. Therefore, the existing models that have been published or may be in clinical use have not yet been evaluated for this cancer site by the Precision Medicine Core of the AJCC. In the future, the statistical prediction models for this cancer site will be evaluated, and those that meet all AJCC criteria will be endorsed.

Recommendations for Clinical Trial Stratification

The authors have not provided any recommendations for clinical trial stratification at this time.

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