CA19-9 Response Pattern during Neoadjuvant Radiation in Pancreatic Cancer Predicts Outcomes

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BACKGROUND AND AIMS

Multimodality Neoadjuvant Therapy for Localized Pancreatic Cancer (PC)

Inclusion Criteria:
- Borderline Resectable PC
- CA19-9 producer (elevated CA19-9 at diagnosis with total bilirubin <2.0 mg/dL)
- Diagnosis and treatment 2009 – 2020
- 2-4 months of neoadjuvant chemotherapy followed by radiotherapy

CA19-9 Classification
- Normal vs elevated (35 U/mL with total bilirubin <2.0 mg/dL)
- Compared values pre- and post- radiation

Results
- CA19-9 Response
  - Before and after radiotherapy
  - 24 months Chemotherapy

METHODS

Proportional change in CA19-9
- Before and after radiotherapy
- Radiation Therapy

RESULTS

Proportional change in CA19-9 before and after radiotherapy

CA19-9 Increase 36 patients (26%)
CA19-9 increased ≥10%

CA19-9 Stable 28 patients (20%)
CA19-9 +10% to -50%

CA19-9 Response 74 patients (54%)
CA19-9 decreased ≥50%

Restratification of patient groups:
- Combined Stable and Rise group (no differences in above analysis)
- Response, but with persistently elevated CA19-9
- Response, with normalization of CA19-9

SUMMARY AND CONCLUSIONS

Normalization of CA19-9 following radiotherapy is the most important prognostic factor and was associated with a median overall survival of 46 months.
- Consistent with prior studies of similarly treated pts
- Suggests local and micrometastatic disease is controlled by systemic treatment

Outcomes among pts with less than a 50% reduction in CA19-9 were no different than pts who had an increasing CA19-9 during neoadjuvant radiotherapy
- These pts have a high probability of occult metastasis
- Modest declines (<50%) in CA19-9 are not oncologically significant

Outcomes among pts with greater than a 50% reduction in CA19-9 without normalization had a significantly improved survival over patients with stable or increasing CA19-9 levels

CA19-9 trends during neoadjuvant treatment may guide therapeutic decisions and characterize tumor biology
- Help determine which pts would benefit from definitive local therapy (surgery) versus continued systemic treatment


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