

Phase I Study of CPI-613

Pardee et al. _____ **Page 5255**

The tricarboyclic acid (TCA) cycle is essential to maintenance of oxidative phosphorylation and an important source of biosynthetic precursors in cancer cells. CPI-613 is a novel inhibitor of 2 key TCA cycle enzymes. Pardee and colleagues report on the results a phase I clinical trial of CPI-613, demonstrating that it was well tolerated and several patients had dramatic and sustained responses. Gene expression profiling of the responding versus nonresponding patients suggested increased immune activation in the responders. This study is the first demonstration of activity and safety of an agent that inhibits the TCA cycle and represents an exciting new weapon in the war on cancer.



Gene Profile Predictive of Postmastectomy Radiotherapy

Tramm et al. _____ **Page 5272**

The benefit of postmastectomy radiotherapy (PMRT) is suspected to be heterogeneous. Tramm and colleagues have identified a gene profile attaining prognostic and predictive impact from microarray-analysis and fresh frozen tissue from 191 high-risk, breast cancer patients randomized to +/- PMRT. The gene profile identified a subgroup of patients not benefiting from radiotherapy in terms of locoregional recurrence. The gene profile was transferred to formalin-fixed, paraffin-embedded material (FFPE) and qRT-PCR, and hereafter independently validated in FFPE from another set of patients. This study is the first to present a gene profile predictive of benefit from PMRT, and the gene profile may potentially assist in individualizing PMRT.

Overdetection of Recurrence after Radical Prostatectomy

Xia et al. _____ **Page 5302**

Rising prostate-specific antigen (PSA) levels after radical prostatectomy (RP) can indicate prostate cancer recurrence years before clinical metastasis. The time interval between PSA recurrence and metastasis can be so long that patients may die of other causes before metastasis; in these cases, recurrence is overdetecting and salvage treatments cannot provide benefit. By using established datasets on time from PSA recurrence to metastasis and competing mortality among RP patients, Xia and colleagues quantify the probability that a recurrence is overdetecting given patient and tumor characteristics. The results provide practical information for patients and providers when deciding whether to initiate salvage treatment.

Integrated Epigenetic Regulation in Bladder Cancer

Peter et al. _____ **Page 5311**

Altered epigenetic gene regulation and cell function through aberrant long noncoding RNA (lncRNA) appears important in human cancer. However, little is known about these lncRNAs in many tumors, including bladder cancer. Peter and colleagues examined the expression of 39,000 lncRNAs and mRNAs in a cohort of normal and malignant urothelial tissues. They identified generalized upregulation of many lncRNAs, which appeared distinct to the more balanced up and down regulation seen for mRNAs. Thirty-two lncRNAs were associated with disease progression. Functional analysis implicated the lncRNA AB074278 for the maintenance of proliferation and apoptosis avoidance in cancer, possibly through targeting the tumor suppressor EMP1.

Downloaded from <http://aacrjournals.org/clinccancerres/article-pdf/20/20/5145/2021088/5145.pdf> by guest on 20 July 2024