Clinical Cancer Research
Highlights
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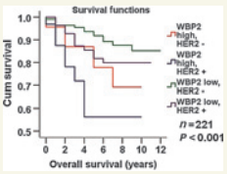
Selected Articles from This Issue

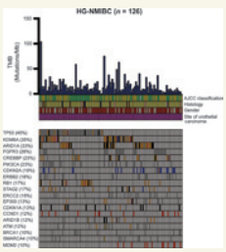
WBP2 Level Correlates with Trastuzumab Neoadjuvant Therapy



While trastuzumab-based chemotherapy has shown remarkable clinical benefits for HER2-positive breast cancer patients, a subset of patients (30%–40%) shows little or no effect. This highlights an important clinical need for biomarkers in addition to HER2 for better stratification of patients for therapy. In this multicenter retrospective study by Kang and colleagues, patients with HER2-positive breast cancer that also overexpress WBP2 had better pathologic complete response to trastuzumab-based neoadjuvant therapy. The potential to predict which patients would attain successful downstaging of their tumors from neoadjuvant therapy could help guide surgical decisions; for example, breast-conserving surgery versus mastectomy, consequently improving patients' outcome. ■

See article by Kang et al., p. 2588

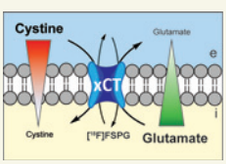
Sequencing Across the Spectrum of Urothelial Carcinoma



Extending previous studies in more restricted populations, Nassar and colleagues examined 472 patients across the spectrum of urothelial carcinoma from nonmuscle-invasive bladder cancer (NMIBC) to upper-tract urothelial carcinoma (UTUC) for mutations in 237 cancer genes. Low-grade NMIBC has a distinct mutation spectrum from invasive disease, suggesting that it is truly a separate pathologic entity unrelated to invasive disease in most instances. Other key findings include enrichment of KDM6A mutations in women with low-grade NMIBC compared to men and identification of a subtype of high-grade UTUC with mutations in FGFR3, EP300, and PIK3CA associated with poorer survival. ■

See article by Nassar et al., p. 2458

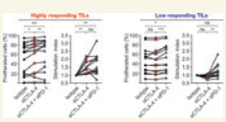
Imaging Chemotherapy Resistance with [^{18}F]FSPG PET



Drug-resistance is a major obstacle for the effective treatment of patients with high-grade serous ovarian cancer (HGSOC), often resulting in the selection of an ineffective treatment course. Using PET imaging with the radiotracer (4*S*)-4-(3-[^{18}F]fluoropropyl)-L-glutamate ([^{18}F]FSPG), Greenwood and colleagues showed decreased radiotracer uptake in chemotherapy-resistant A2780 tumors compared with parental drug-sensitive tumors, demonstrating the ability of [^{18}F]FSPG to detect upregulated antioxidant pathways present in drug-resistant cancer. [^{18}F]FSPG may, therefore, enable the identification of HGSOC patients who are refractory to standard-of-care, allowing the transferal of drug-resistant patients to alternative therapies and thereby improving outcomes in this disease. ■

See article by Greenwood et al., p. 2471

Effect of Immune Checkpoint Inhibitors on Glioblastoma TILs



To understand the immunological nature of glioblastoma, Park and colleagues examined the expression of immune checkpoint inhibitory receptors in tumor-infiltrating CD8$^+$ T cells from patients with primary glioblastoma and their differentiation status. In addition, they investigated the reinvigoration ability of tumor-infiltrating CD8$^+$ T cells by *ex vivo* treatment with anti-PD-1 and anti-CTLA-4. They demonstrated that the differentiation status of tumor-infiltrating CD8$^+$ T cells determines the reinvigoration ability. This study provides a rationale for developing optimal strategies for immune checkpoint inhibitor treatment in patients with glioblastoma. ■

See article by Park et al., p. 2549

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Clin Cancer Res 2019;25:2361.