Solid Organ Transplantation and Survival among Individuals with a History of Cancer

Engels et al. | Page 1312

A prior cancer diagnosis is common among solid organ transplant candidates, and immunosuppressive medications administered to transplant recipients may increase recurrence risk. Engels and colleagues used data from the United States transplant registry and 13 cancer registries to assess cancer-specific survival among 10,524,326 cancer patients, 5425 of whom (0.05%) subsequently underwent transplantation. Transplantation was not associated with decreased cancer-specific survival for any cancer site. Protective associations were observed for patients with breast cancer, non-Hodgkin lymphoma, and myeloma. These results partly reflect careful transplant candidate selection and do not demonstrate a detrimental effect of immunosuppression on cancer-specific survival, supporting current management strategies.

Biomarkers of Potential Harm among Adult Cigarette and Smokeless Tobacco

Chang et al. | Page 1320

Chang and colleagues analyzed BOPH data across 3,460 adults in Wave 1 of the PATH Study, including current exclusive smokeless tobacco (ST) use among never smokers (primary ST users) and former smokers (secondary ST users), exclusive cigarette smokers, dual users of ST and cigarettes, former smokers, and never tobacco users. BOPH concentrations among primary ST users were similar to never tobacco users and former smokers. Dual users had significantly higher sICAM-1, IL-6, and F2-isoprostane compared to never tobacco users, but looked similar to exclusive smokers. ST use alone and in combination with smoking may affect levels of inflammatory and oxidative stress levels.

Tumor-associated Stromal Cellular Density as a Predictor of Recurrence and Mortality in Breast Cancer

Abubakar et al. | Page 1397

Recruitment of stromal cells into the tumor microenvironment may influence disease progression and prognosis in breast cancer. By applying machine learning algorithms to digitized H&E-stained sections for 2,084 breast cancer patients from China, Poland, and the United States, Abubakar and colleagues characterized tumor-associated stromal cellular density (SCD) as the percentage of tumor-stroma that is occupied by nucleated cells. The authors found increasing SCD to be independently predictive of poor clinical outcomes among patients with hormone receptor-positive breast cancer from all three study populations. The findings suggest that SCD assessment on H&E-stained sections, which are routinely performed and widely available, could help refine prognostic assessment and treatment decision-making for patients with hormone receptor-positive breast cancer.

Association of Oophorectomy and Fat and Lean Body Mass

Karia et al. | Page 1424

Many women undergo risk-reducing oophorectomy (RRO) for ovarian cancer prevention at the time of hysterectomy. The abrupt decline in circulating hormones after RRO may impact body composition, particularly in premenopausal women. In this diverse national sample of women, Karia and colleagues observed higher total and regional (trunk, arms, legs) fat mass and lower lean mass among women with hysterectomy and RRO than those with hysterectomy alone or no surgery. Point estimates were stronger among women <45 years at surgery and those with a normal BMI. Longitudinal studies are needed to assess changes in body composition after RRO and to test interventions to mitigate these effects.