

CANCER PREVENTION RESEARCH

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RESEARCH BRIEF

- 763** **Assessing Electronic Nicotine Delivery Systems Use at NCI-Designated Cancer Centers in the Cancer Moonshot-funded Cancer Center Cessation Initiative**
Heather D'Angelo, Stephanie R. Land, and Rachel Grana Mayne
- This study identifies a gap in the systematic assessment of ENDS use among patients seen at 42 NCI-Designated cancer centers. Requiring the systematic assessment of both ENDS use and use of other tobacco products can inform evidence-based treatment of tobacco dependence and lead to improved cancer treatment outcomes.

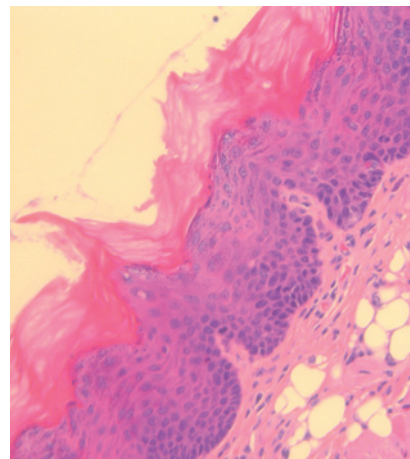
RESEARCH ARTICLES

- 767** **Local Anti-PD-1 Delivery Prevents Progression of Premalignant Lesions in a 4NQO-Oral Carcinogenesis Mouse Model**
Yewen Shi, Tong-xin Xie, David G. Leach, Bingbing Wang, Simon Young, Abdullah A. Osman, Andrew G. Sikora, Xiaoyong Ren, Jeffrey D. Hartgerink, Jeffrey N. Myers, and Roberto Rangel
- Oral cancer is an aggressive disease, with an overall survival rate of 50%. Preinvasive histologic abnormalities such as tongue dysplasia represent an early stage of oral cancer; however, there are no treatments to prevent oral carcinoma progression. Here, we combined biomaterials loaded with an immunotherapeutic agent preventing oral cancer progression.
- 779** **Breast-Specific Molecular Clocks Comprised of *ELF5* Expression and Promoter Methylation Identify Individuals Susceptible to Cancer Initiation**
Masaru Miyano, Rosalyn W. Sayaman, Sundus F. Shalabi, Parijat Senapati, Jennifer C. Lopez, Brittany Lynn Angarola, Stefan Hinz, Arrianna Zirbes, Olga Anczukow, Lisa D. Yee, Mina S. Sedrak, Martha R. Stampfer, Victoria L. Seewaldt, and Mark A. LaBarge
- ELF5* expression or DNA methylation level at the *ELF5* promoter region can be used as breast-specific biological clocks to identify women at higher than average risk of breast cancer.
- 795** **Common Analgesic Use for Menstrual Pain and Ovarian Cancer Risk**
Naoko Sasamoto, Ana Babic, Allison F. Vitonis, Linda Titus, Daniel W. Cramer, Britton Trabert, Shelley S. Tworoger, and Kathryn L. Terry
- This study investigates whether analgesic use specifically for menstrual pain during the premenopausal period influences ovarian cancer risk. Our results suggest use of aspirin or acetaminophen for severe menstrual pain may be associated with lower risk of ovarian cancer among women with severe menstrual pain.
- 803** **"Rescue" of Nonparticipants in Colorectal Cancer Screening: A Randomized Controlled Trial of Three Noninvasive Test Options**
Graeme Paul Young, Gang Chen, Carlene J. Wilson, Ellen McGrane, Donna Lee-Ann Hughes-Barton, Ingrid Helen K. Flight, and Erin Leigh Symonds
- This trial of screening for those at average risk for colorectal cancer targeted past fecal-test nonparticipants and compared participation rates for mailed invitations offering a fecal test, blood test, or choice of either. Although there was no clear advantage between strategies, factors associated with participation differed between each strategy.
- 811** **The Costs and Benefits of Risk Stratification for Colorectal Cancer Screening Based On Phenotypic and Genetic Risk: A Health Economic Analysis**
Chloe Thomas, Olena Mandrik, Catherine L. Saunders, Deborah Thompson, Sophie Whyte, Simon Griffin, and Juliet A. Usher-Smith
- Colorectal cancer screening is essential for early detection and prevention of colorectal cancer, but implementation is often limited by resource constraints. This work shows that risk-stratification using genetic and phenotypic risk could improve the effectiveness and cost-effectiveness of screening programs, without using substantially more screening resources than are currently available.

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ABOUT THE COVER

Oral squamous cell carcinoma (OSCC) is the 6th most common cancer among men and has one of the highest cancer incidence rates in the United States. Patients with oral premalignant lesions (OPLs) are under constant fear of cancer development, sometimes for decades, and about 30% OPLs still progress to OSCC despite current treatments. Mutations in *TP53* have been detected in approximately 30% of the OPLs, suggesting that these mutations arise early during oral tumor development and might influence the progression of OPLs, and their response to preventive strategies. Recently, immunotherapy in the form of immune checkpoint inhibitors, such as programmed death receptor 1 (PD-1) has recently been introduced as a promising therapeutic option for patients with solid tumors including OSCC. In the study starting on page 767, Rangel and colleagues used wild type and mutant p53 mice to demonstrate a novel approach of local delivery of anti-PD-1 antibody, which significantly prevents the progression of OPLs to carcinomas in a carcinogenesis oral cancer mouse model. A single local dose of PD1 inhibitor restores STING expression, infiltration of CD11c+ dendritic, and CD8+ T cells into the tumor immune environment irrespective of the p53 mutational status. The cover shows a Hematoxylin and eosin stain image of oral mild dysplasia treated with IgG2a in p53 wild-type mice.



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