

## ABSTRACTS • 41<sup>st</sup> Annual Meeting • American Society of Preventive Oncology, Grand Hyatt Hotel, Seattle, Washington, March 12–14, 2017

*The following are the 16 highest scoring abstracts of those submitted for presentation at the 41st Annual ASPO meeting held March 12–14, 2017, in Seattle, WA.*

### Effective Cancer Risk Communication to Prevent Disparities in the Era of Precision Medicine

Joseph G, Pasick RJ, Schillinger D, Luce J, Cheng JKY, Guerra C

As genetics and genomics become part of mainstream Medicine, these advances have the potential to reduce or exacerbate health disparities. Gaps in effective communication (where all parties share the same meaning) are widely recognized as a major contributor to health disparities. The purpose of this study was to examine cancer genetic counselor-patient communication, to assess its effectiveness from the patient perspective, and to pilot intervention strategies to improve it. We used multiple inductive methods, including standard ethnographic techniques to systematically observe and audio-record genetic counseling sessions, and qualitative interviews with observed patients using the audio recordings to stimulate recall and probe specific aspects of the communication. Data analyses were conducted using grounded theory. We observed 64 English-, 35 Spanish- and 25 Cantonese- speaking public hospital patients ( $n = 124$ ) and 10 Genetic Counselors in 170 appointments, and interviewed 49 patients who had been offered testing. We identified a fundamental mismatch between the information provided by genetic counselors and the information desired and meaningful to patients. Several components of the communication that contributed to this mismatch and often resulted in ineffective communication included: (1) too much information; (2) complex terminology and conceptually difficult presentation of information; (3) information perceived as not relevant by the patient; (4) unintentional inhibition of patient engagement and question-asking; (5) vague discussions of screening and prevention recommendations. To address these communication barriers, we adapted from other fields of Medicine to the genetic counseling context and pilot tested evidence-based strategies for effective communication with limited literacy patients. Our findings indicate a need to transform the standard model of hereditary cancer risk communication. The increasing access of diverse populations to genetic services, high rates of limited health literacy in the US, and growing complexity of genetic information have created a perfect storm. If not directly addressed, this convergence can be expected to exacerbate health disparities in the genomic age.

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### Decision Support and Navigation to Increase Colorectal Cancer Screening among Hispanic Primary Care Patients

Myers RE, Stello B, Daskalakis C, Sifri R, DiCarlo M, Johnson M, Gonzalez E, Hegarty S, Rivera A, Gordis-Molina L, Shaak K, Quinn A, Careya B, Anderson-Ortiz R

The study compared the impact of a novel decision support and navigation intervention (DSNI) to a mailed standard intervention (SI) on colorectal cancer (CRC) screening among Hispanic patients from 5 primary care practices in the Lehigh Valley Health Network (LVHN). **Methods.** We randomized surveyed and consented patients who were 50 to 75 years of age and were eligible for CRC screening either to an SI Group ( $n = 200$ ) or a DSNI Group ( $n = 200$ ). Following randomization, SI Group participants were mailed a set of standard materials (i.e., a letter from the participant's primary care practice encouraging selection and performance of either colonoscopy screening or a stool blood test (SBT) screening, a SBT kit, and instructions for arranging a colonoscopy appointment. Print materials were provided in English and Spanish. DSNI Group participants were also mailed the standard materials. In addition, DSNI participants received a telephone call from a bilingual patient navigator who reviewed the screening materials and verified the participant's preferred CRC screening test. During the call, the patient navigator used an online Decision Counseling Program© (DCP) to determine the participant's likelihood of test performance and to develop a personalized test preference- and likelihood-based screening plan. The plan was mailed to the participant and his/her primary care practice; and a participant screening status report was sent to the practice at 6 months. Finally, a 6-month survey was targeted to participants in both study groups. **Results.** Based on 6-month survey and medical records data, we found that CRC screening adherence was significantly higher (OR = 3.48, CI: 2.29, 5.29,  $P < 0.001$ ) in the DSNI Group (73%) versus the SI Group (44%). **Conclusions.** A decision support and navigation intervention significantly increased CRC screening adherence among Hispanic primary care patients.

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### Explaining Disparities in Ovarian Cancer Incidence Rates between Women of African and European Ancestry: The Role of Genetic Factors

Mullins M, Mukherjee B, Wu AH, Pike M, Pharoah PDP, Berchuck A, Pearce CL, on behalf of the OCAC

Non-Hispanic White (NHW) women are at higher risk of ovarian cancer than African-American (AA) women. Approximately 30%

of the difference in age-adjusted invasive epithelial ovarian cancer incidence rates (AAIR) between the two groups can be explained by differing oophorectomy rates and the prevalence of non-genetic risk and protective factors. Our purpose was to determine how much of the remaining difference in AAIRs could be explained by varying allele frequencies between NHWs and AAs for 18 genome-wide significant common susceptibility variants for ovarian cancer. Using data on 13,385 cases and 24,875 controls from the Ovarian Cancer Association Consortium, a genetic risk score (GRS) was created from 18 single nucleotide polymorphisms (SNPs) associated with ovarian cancer risk following the Collaborative Oncological Gene-environment Study (COGS) effort. Relative risks for each GRS quintile were estimated using conditional logistic regression, adjusting for genetic ancestry and conditioning on study site, age, and race. The population attributable risk percent (PAR) for GRS above the lowest quintile was calculated using the Bruzzi method. Previously reported oophorectomy and non-genetic risk factor (talc, oral contraceptive use, family history of ovarian cancer, endometriosis, parity and tubal ligation) adjusted incidence rates for ovarian cancer in NHWs and AAs were 7.2 and 5.8 per 100,000 respectively. These incidence rates were further adjusted for the contribution of the GRS from this analysis. The subsequent genetic PAR adjusted rate was 5.1 per 100,000 for the European ancestry group and 4.9 for the African ancestry group, after taking into account the different oophorectomy rates and prevalence of non-genetic risk factors. These incidence rates show the unexplained difference in incidence rates between NHWs and AAs is only 3.9%. Future efforts should focus on incorporating novel non-genetic and genetic factors into this analysis to determine whether essentially all of the difference in incidence between these groups can be explained.

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### Pilot-Testing a Survivorship Needs Assessment Planning Tool for Head and Neck Cancer Survivors and Caregivers

Sterba KR, Zapka J, Armeson K, Garris TK, Scallion M, Day TD

The purpose of this study was to develop and pilot-test a tablet-based survivorship needs assessment planning (SNAP) tool to assess head and neck cancer (HNC) survivor and caregiver needs after treatment and generate tailored care plans. We recruited survivors completing treatment <24 months ago, and their caregivers. Participants completed baseline surveys, a clinic session with SNAP assessments (symptoms, unmet needs, behaviors) and care plan delivery, and 6-week follow-up surveys. We tracked intervention delivery/acceptability and used paired t-tests to explore changes in psychosocial factors over time. We enrolled 25 survivors (65% male, mean age = 63, 65% stage IVA) and their caregivers (73% female, mean age = 56, 77% partners). The average time to complete SNAP assessments was 11 and 6 minutes for survivors and caregivers, respectively. Algorithm-driven care plans included messages (mean = 19), educational materials (mean = 13) and referrals (mean = 4.5). Top referrals included Behavioral Medicine, Nutrition and Physical Therapy (84, 77 and 65% flagged, respectively). In those declining referrals, main reasons included being overwhelmed, seeing local provider or

lacking interest. Participants rated SNAP favorably with >80% reporting high comfort using tablets and navigating questions. Dyads strongly agreed that care plans were helpful emotionally (>75%) and provided practical information (>73%). After the session, both survivors and caregivers reported significantly fewer unmet needs (7.7 versus 2.9,  $P = 0.001$  survivors; 7.0 versus 4.1,  $P = 0.02$ , caregivers) and higher survivorship preparedness (4.9 versus 5.2 in both,  $P = 0.02$  and  $P = 0.03$ ). While depression, symptom distress and symptom management abilities were stable in survivors, caregivers had significantly lower depression ( $P = 0.01$ ) and symptom distress ( $P = 0.03$ ), and higher ratings of perceived patient symptom management abilities ( $P = 0.004$ ) at follow-up. Open-ended responses highlighted that SNAP visits helped pull together complex medical information and made families feel supported. Participants desired more information about cancer stage and caregivers preferred earlier intervention. Results support the feasibility of implementing SNAP in the HNC clinic and highlighted needed modifications for system improvement.

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### Long-term Adherence to Colorectal Cancer Screening; 5-Year Results from the Systems of Support to Increase Colorectal Cancer Screening Trial

Green BB, Anderson ML, Chubak J, Fuller S, Meenan RT, Vernon SW

Colorectal cancer (CRC) is the second-leading cause of cancer deaths. Mortality could be rapidly reduced through higher uptake and adherence to CRC screening. Information on long-term screening adherence comes from organized programs that lack a comparison group. Objective: Systems of Support to Increase Colorectal Cancer Screening is an ongoing trial testing a centralized mailed and phone-based program to increase long-term CRC screening adherence. We hypothesized that compared to usual care (UC) intervention-arm patients would have more time in compliance with CRC screening guidelines over 5 years. Methods: The setting was an integrated healthcare organization in Washington State. UC included patient-centered medical home with clinic-based strategies to increase screening. Participants included 4675 individuals initially aged 50–74, not current for CRC screening. Intervention arms combined were compared to UC. The primary outcome was the percent of time covered for CRC screening over 5 years of follow-up. Screening tests contributed covered time based on national guidelines for screening intervals. All participants contributed data, but were censored at disenrollment, death, age 76, or CRC diagnosis. Interventions: Patients were randomly assigned to receive UC, or one of three stepped care interventions: 1. Mailings including mailed fecal tests, a call-in number if colonoscopy or sigmoidoscopy was preferred; 2. Mailings plus brief telephone assistance; 3. Mailings and telephone assistance plus nurse navigation. In year 3, intervention group participants still CRC screening-eligible were randomized to stopped or continued mailed interventions only. Results: Compared to UC, intervention participants had 31% more time not in need of CRC testing (adjusted rate ratio, weighted for exposure time 1.31