

Reducing your cancer risk

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All Cancer Sites Combined Incidence Rates by Age at Diagnosis, 2013-2017 By Race/Ethnicity, Both Sexes, Los Angleles



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How do we identify what causes cancer?



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Preventable cancer risk factors



Guidelines to Reduce Cancer Risk

Research shows that about one-fifth of all cancers diagnosed in the United States can be attributed to being overweight or obese, being physically inactive, eating poorly, and drinking excessively. Based on current evidence, experts from the World Cancer Research Fund International recommend people:



American Association for Cancer Research (AACR) Cancer Disparities Progress Report 2020

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Diet and cancer risk: protective factors

Diet can contribute to 5-30% of many cancers



□ At least **30** grams/day of fiber from food sources

Include in **most** meals foods containing whole grains, non-starchy vegetables, fruit and pulses (legumes)

□ At least **5** portions or servings (15 ounces) of non-starchy vegetables and fruit every day

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Diet and cancer risk: protective factors



8-10 grams

7 grams



8-10 grams

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Diet and cancer risk: risk factors



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Diet and cancer risk: risk factors



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Obesity and Physical Activity



□ At least 150 minutes of moderate physical activity or at least 75 minutes of vigorous physical activity/week



→ ~ 20 minutes of activity per day!

□ Keep a healthy weight: BMI of 18.5–24.9

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Environmental factors



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Early detection: Cancer screening

Cancer	Procedure	Age	Frequency
Breast cancer	Mammography	50-74 consensus 40+ supported	Every 1-2 years
Cervical cancer	Pap + HPV test	21-65	21-29: every 3 yrs 30-65: 3-5 yrs
Colorectal cancer	Colonoscopy (preferred) Fecal tests (alternative)	45-75 40+ in Puerto Rico	Every 10 yrs or more often depending on test
Lung cancer	Tomography	55-80 at high-risk	When recommended
Prostate cancer	PSA test	55-69	Annually or when recommended

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Key priorities for Norris



Include more Black & Hispanic patients in clinical trials

> Reduce burden of liver cancer among Hispanics

Larger representation of racial/ethnic minorities in research

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USC Norris Comprehensive Cancer Center Keck Medicine of USC

Eliminate cancer

disparities

Community education about cancer

Understand

barriers to access

screening and

care among Black

and Hispanics

Engagement of Hispanic patients with colorectal cancer



Engage Patients & Provide Cancer and Genetics Education



Obtain genetic information about patient and their tumor



Return information to patient and use it for **Precision Medicine**



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Thank you!



https://care2healthequitycenter.org/

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Updates on Skin Cancer Prevention in 2022

Gino K. In, MD, MPH Assistant Professor of Medicine and Dermatology USC Norris Comprehensive Cancer Center Division of Medical Oncology

October 20, 2022





The Problem?

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Skin Cancer Incidence and Mortality

- Skin cancers collectively are the most common cancers in the US:
 - 3.5 million cases diagnosed annually
- Melanoma is the fifth most common cancer
 - 100,000 new cases of melanoma diagnosed annually
 - 10,000 cases in California
- Skin cancers affect people of all ages:
 - Average age of diagnosis for melanoma is 65 years old
 - Melanoma is the **third** most common cancer for young adults 20 40 years old
- Skin cancers are deadly:
 - 7,500 deaths annually from melanoma
 - 10,000 deaths from other non-melanoma skin cancers

CA Canc J Clin 2022 Siegel ; CA Canc J Clin 2020 Miller

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How to Prevent Skin Cancer

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How do we prevent skin cancer?



 Primary Prevention: preventing disease before it occurs

 Secondary Prevention: reducing the impact of disease once it has already occurred

 Tertiary Prevention: preventing progression / long term complications of the disease

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Primary Prevention

J Clin Oncol 2011 Green AC ; Arch Dermatol 2002 ; J Am Acad Dermatol 2012 Buller ; Int J Cancer 2007 IARCWG ; JAMA Dermatol 2016 Lazovich

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Secondary Prevention

Br J Dermatol 2008 Vestergaard ; Int J Derm 2015 Dengel ; Int J Environ Res Public Health 2021 Hornung ; molemapper.org

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Tertiary Prevention

N Engl J Med 2015 Chen AC; Canc Epi Bio Prev 1997 Moon; Lancet 2022 Luke; N Engl J Med 2017 Weber; N Engl J Med 2018 Eggermont

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Our research



- Can we combine immunotherapy with other approaches?
- How does timing affect the impact of immunotherapy?
- Do diet and environmental factors matter?

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Keck Medicit^{Trends Immuno 2021 Wilhelm}; Sci Reports 2020 Mindikoglu; clinicaltrials.gov/ct2/show/NCT04387084

Thank you for listening!

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Gynecological Cancers: From Early Detection to Future Directions

Annie Yessaian, MD Assistant Professor of Obstetrics & Gynecology Gynecologic Oncology

October 20, 2022





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Cervical Cancer Early Detection Pap Smear





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Uterine Cancer Early Detection





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Ovarian Cancer Early Detection







BI-MANUAL PELVIC EXAMINATION

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Surgical Services





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Chemotherapy & Immunotherapy





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Clinical Trials @ USC

Cervical Cancer immunotherapy Ovarian Cancer immunotherapy Cooperative Group Trials Investigator Initiated Trials Industry Sponsored Trials



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Future Directions @ USC

Tumor Tissue Bank-Repository

Ovarian Cancer tumor biomarkers



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Thank you

Annie Yessaian, MD Assistant Professor of Obstetrics & Gynecology Gynecologic Oncology Annie.Yessaian@med.usc.edu

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Creative Interventions in Medicine

Jacek Pinski, MD, PhD Associate Professor of Medicine



October 20, 2022

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Background

- Sick patients often experience severe psychological symptoms
- Poor mental health has been associated with worse treatment adherence, decreased quality of life (QOL) and increased risk of cancer-associated mortality
- An average of 1 in 5 cancer patients were found to suffer from posttraumatic stress disorder (PTSD)
- Art interventions have been shown to improve quality of life (QOL) indices in patients by reducing anxiety, depression and pain
- The most effective methods of art-exposure and any effects on long-term health status need to be explored

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Creative Interventions in Cancer Patients

Systemic Review of more than 70 Clinical Trials (more than 5000 patients)

- Compared with standard care, **Music Therapy** has beneficial effects on:
- 1. Pain
- 2. Quality of Life
- 3. Anxiety
- 4. Depression
- 5. Fatigue
- Art Making has been shown to enhance diversion and pleasure, selfmanagement of pain, a sense of control, and social relationships

References:

- Cochrane Database Syst Rev 2016 Aug 15;(8)
- Ennis G, Kirshbaum M, Waheed N.Eur J Cancer Care (Engl). 2018 Jan;27

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Institute for Arts in Medicine (I_AM)



Mission Statement: *I_AM* seeks to design, deploy and assess creative therapies in patient care, converging different forms of art with science and medicine.

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Music Infusion



Patient-directed music composition, lyric writing and original covers of favorite songs through I_AM and AYA@USC collaboration. The Active Music Engagement AME process engages the patient in a dialogic interactive music experience with songwriters and composers.

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Poetry for Patients



WATCH LIVE

USC researchers are studying the effects of art in treating cancer and the program has been helpful to health care workers, too.





This program offers customized poetry for patients, developed and presented by Poets in Residence. Prospective patients or caregivers of patients are interviewed, and individual poems are generated, based on information shared.

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I_AM Painting Health





Patient bodies are painted over areas of disease. Upon completion of each body painting, friends and family are invited to pray over their loved ones for successful outcomes to treatment-based interventions.

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RESEARCH

- Function as a center of excellence for research with practical applications for incorporating expressive arts, music, and technology into clinical care
- Study and demonstrate the scientific credibility of creative interventions in medical care of cancer patients
- Initiate pilot research studies
- Conduct larger prospective studies with the participation of students, faculty and any partnering agencies

Virtual Reality in Medicine

Clinical Uses

- VR has found an array of uses in medicine, including:
 - chronic pain
 - physical fitness
 - phantom limb pain
 - rehabilitation post-stroke
 - Parkinson's disease
 - acute pain among burn victims
 - pain associated with venipuncture in pediatric population



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PROTOCOL 0S-17-10: Effects of VR on patients undergoing: *Bone Marrow Biopsy, Lumbar Puncture or Prostate Biopsy*

Objectives





Patients with cancer endure numerous procedures over their diagnosis and treatment course, many of which are invasive, causing significant distress. This study aims to mitigate the immediate difficulties of such procedures.

This protocol will evaluate the feasibility of VR during invasive procedures (i.e. bone marrow biopsy and lumbar puncture) to obtain preliminary estimates of the level of pain and anxiety with patient reported scales and biomarkers.

We hypothesize a decrease in pain, anxiety and stress levels peri- and post-procedure in the VR arm compared to the non-VR arm (standard of care).

The implementation of VR in the healthcare setting may serve as a cost-effective, non-pharmacological agent to alleviate pain, anxiety, and stress.

Image Credits: Kurtbrindley.com; ALiEM

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Website: <u>https://artsinmed.usc.edu/</u>

Email: pinski@usc.edu

Video: https://vimeo.com/artsinmed/iam

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Thank you!

Questions?



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