

Cancer Prevention and Control (CPC) Program

Elisa V. Bandera, MD, PhD
Carolyn J. Heckman, PhD

April 26, 2023



RUTGERS
Cancer Institute
of New Jersey
RUTGERS HEALTH

NCI Comprehensive
Cancer Center
A Cancer Center Designated by the
National Cancer Institute



≡ Cancer Prevention and Control Program: Leadership



Elisa V. Bandera, MD, PhD

Professor and Chief
Cancer Epidemiology and Health Outcomes

- NCI R01 (1 and 2 supplements as MPI)
- NCI (2 R01s + 1R37 as site PI)
- V Foundation (1 as site PI)

Bandera's Expertise and Role in Program

- **Expertise:** Cancer epidemiology, nutrition and cancer, cancer health equity
- **Role:** Leads and facilitates cancer epidemiology and cancer health equity research



Carolyn J. Heckman, PhD

Professor
Behavioral Sciences

- NCI R01s (3 as MPI)

Heckman's Expertise and Role in Program

- **Expertise:** Behavioral science, intervention, and implementation science research
- **Role:** Leads and facilitates dissemination and implementation science research

Shared Program Responsibilities

- Organize seminar series, works-in progress, and research retreats
- Issue and manage strategic pilot funding
- Recruit members
- Facilitate consortium collaborations
- Work with other program leaders and AD for Population Science and Community Outreach to enhance inter-program collaborations
- Facilitate mentoring and training of diverse junior investigators and trainees
- Foster active collaborations and engagement with COE and the CCAB

Program Aims

AIM 1

Advance the understanding of multi-level determinants of cancer risk, treatment, and patient-reported and survival outcomes with an emphasis on minorities and underrepresented populations.

AIM 1

Bandera	Kinney
Beninato	Laird
Currie 	Laumbach
D'Arcy	Malin
Goldman 	Moore
Graber	Qin
Halm	Satagopan
Iyer	Setoguchi
Jang	Stroup
Jarrin	Weiss
Khosrow	Zeinomar

Program Aims

AIM
1

Advance the understanding of multi-level determinants of cancer risk, treatment, and patient-reported and survival outcomes with an emphasis on minorities and underrepresented populations.

AIM
2

Characterize and prevent tobacco use and guide effective tobacco control strategies at multiple levels to reduce cancer morbidity and mortality.

AIM 2

Bover Manderski	Jeong
Chen-Sankey	Leyro
Delnevo	Ra
Farris	Schroth
Ganz	Steinberg
Heckman	Villanti
Hrywna	Wackowski
Hudson	

Program Aims

AIM
1

Advance the understanding of multi-level determinants of cancer risk, treatment, and patient-reported and survival outcomes with an emphasis on minorities and underrepresented populations.

AIM
2

Characterize and prevent tobacco use and guide effective tobacco control strategies at multiple levels to reduce cancer morbidity and mortality.

AIM
3

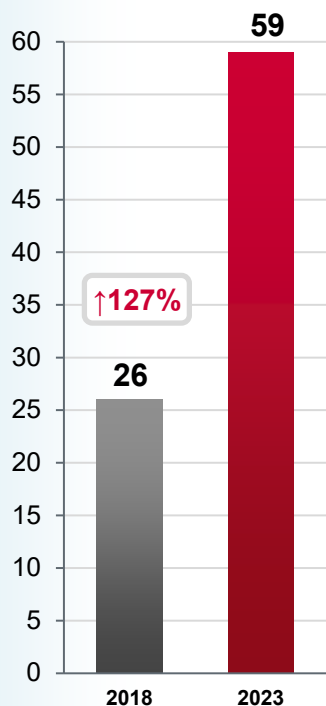
Enhance cancer risk reduction, screening behaviors, and outcomes through the development and evaluation of novel interventions and implementation science.

AIM 3

Crabtree	Hudson
Daniel	In
Devine-Recuay	Kinney
Duberstein	Kohler
Ferrante	Lin
Fong	Manne
George	Ohman-Strickland
Greene	O'Malley
Halm	Ra
Heckman	Rivera

Program Membership Profile

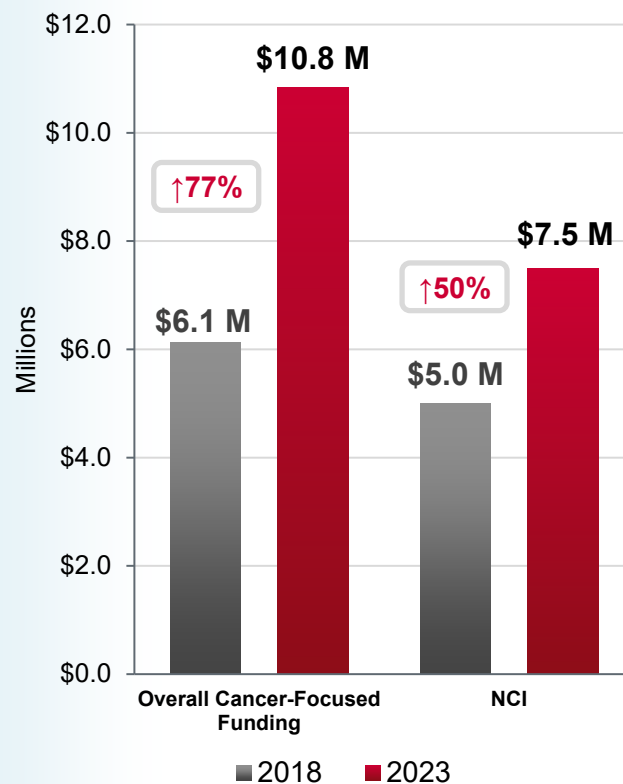
Membership



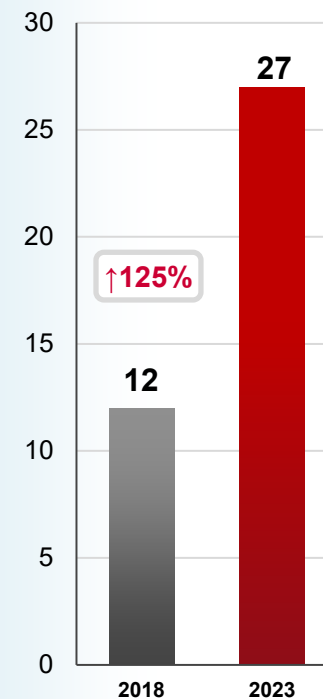
2023

19 Departments
7 Schools
2 Universities
41 New Members

Total Cancer Relevant Funding



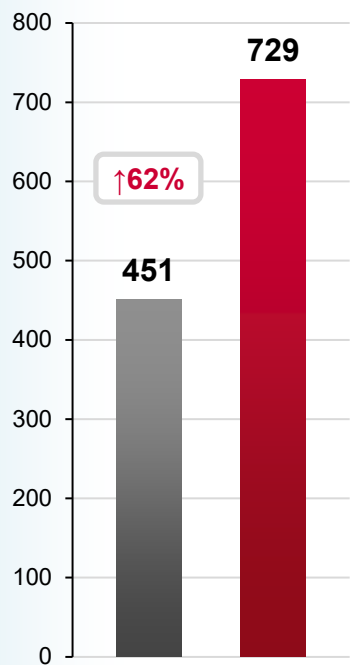
R01 Equivalents



2018: 11 PIs/PDs
2023: 20 PIs/PDs
(Not included: newly funded
\$11 M (direct costs) U01)

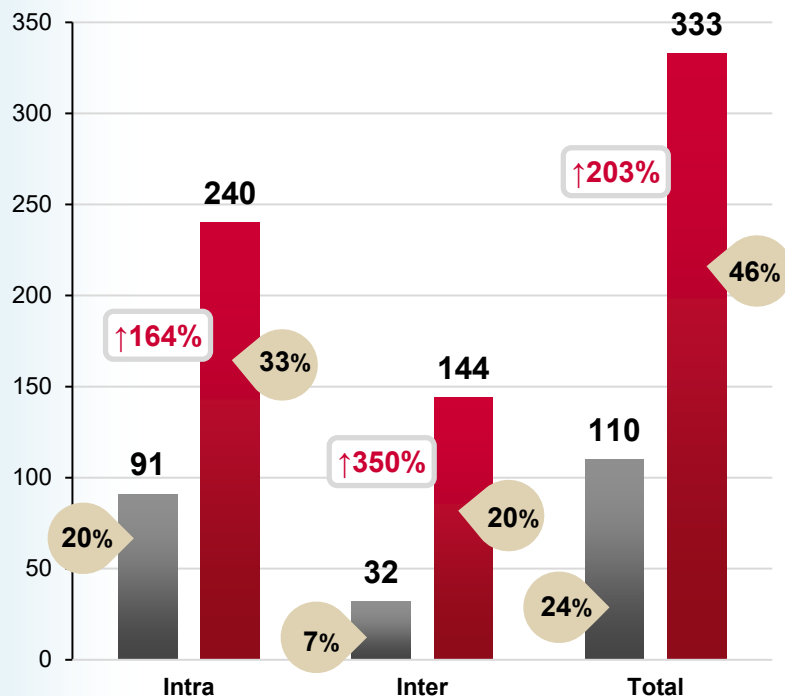
Program Productivity and Collaborations

Total Publications



■ 2018 Submission ■ 2023 Submission

Collaborative Publications

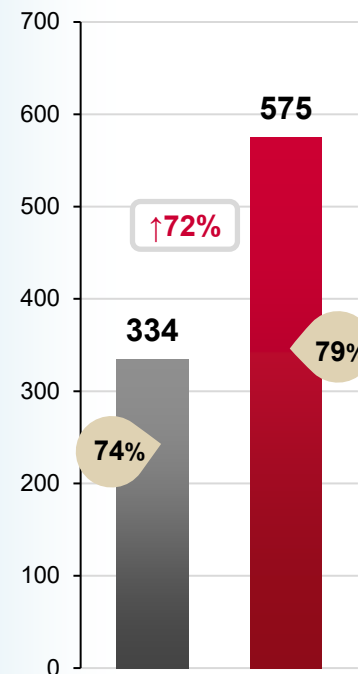


■ 2018 Submission ■ 2023 Submission

High impact publications (IF ≥ 10): 10% (70)

Publications with citations ≥ 10: 24% (177)

Collaborative Publications with Other Institutions



■ 2018 Submission ■ 2023 Submission

Response to Prior Critique

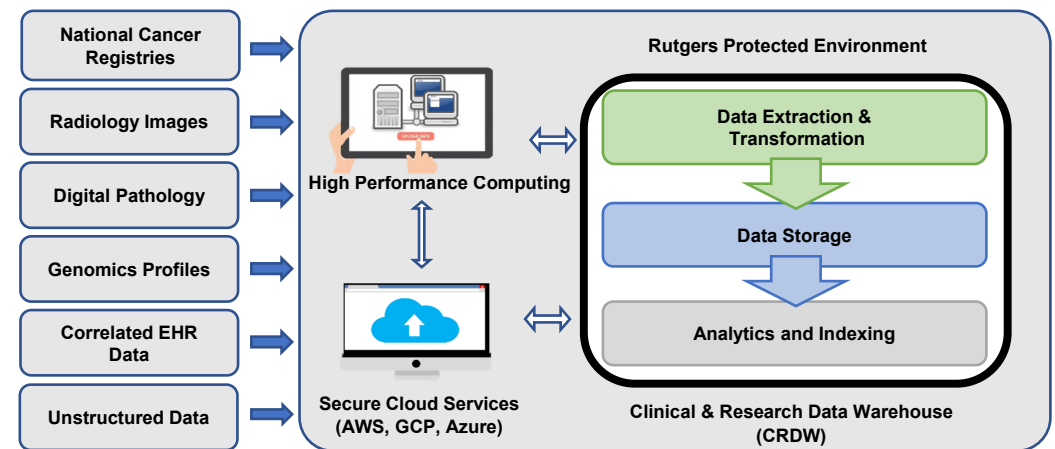
Scored **Outstanding**

Increased Inter-programmatic Collaborations

- Inter-program publication rate has **continued to increase** (from 7% to 20%)
- **New ongoing inter-programmatic collaborations**, including several R01s

Capitalizing on Clinical Informatics

- **EPIC** implementation at CINJ in 2022 (by 2023 across the entire RWJBH system)
- Inaugural RU/RWJBH **Vice Chancellor of Population Health** hired (Ethan Halm, CPC)
- Development of a **Clinical and Research Data Warehouse**
- EMR currently used by **multiple peer-reviewed, funded research projects**



Evaluating Risk, Survivorship, and Survival in a Cohort of Black Breast Cancer Survivors in New Jersey



Shared Resources

- Biospecimen Repository/Histopathology
- Biomedical Informatics

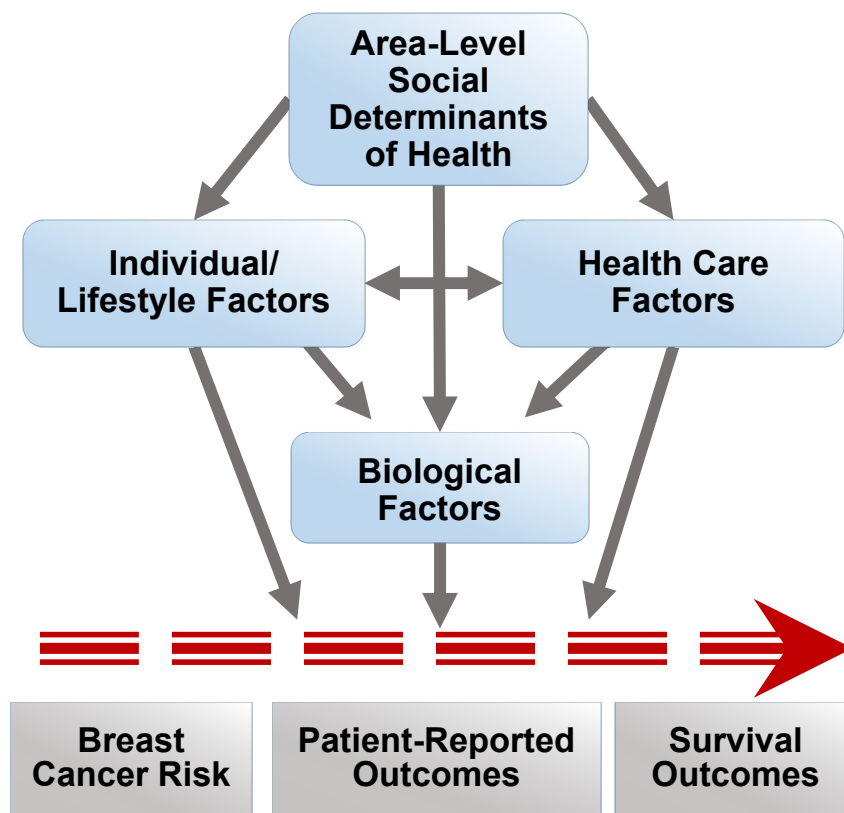
Grants

- R01CA185623
- R01CA185623S1
- R01CA185623S2
- R00MD01330
- K01CA193527
- K01CA211789
- K22CA251493
- K07CA222158
- K07CA201334

Selected Publications

- Zeinomar, *JAMA Ntw Open*, 2023
- Qin, *J Clinical Oncology* 2022
- Bandera, *JAMA Oncology* 2021
- Qin, *CEBP* 2021
- Qin, *Am J Clin Nutr* 2020
- Bandera, *J of Cancer Survivorship* 2020
- Xing, *CEBP* 2020
- Llanos, *Breast Cancer Res* 2020

Multi-level framework



Impact:

- Novel findings on causes of persistent worse outcomes in Black women after breast cancer diagnosis
- Contributed to global cancer prevention recommendations
- Led to **resistance training intervention trial** (Fong)

Catchment Area Priorities:

Breast cancer, social determinants of health, cancer health disparities, obesity



Satagopan
(COE Liaison)

Collaboration with COE

Evaluating Risk, Survivorship, and Survival in a Cohort of Black Breast Cancer Survivors in New Jersey



Bandera



Qin



Goldman



Omene
(CIPT)



Lin



Zeinomar

Shared Resources

- Biospecimen Repository/Histopathology
- Biomedical Informatics
- Biostatistics

Grants

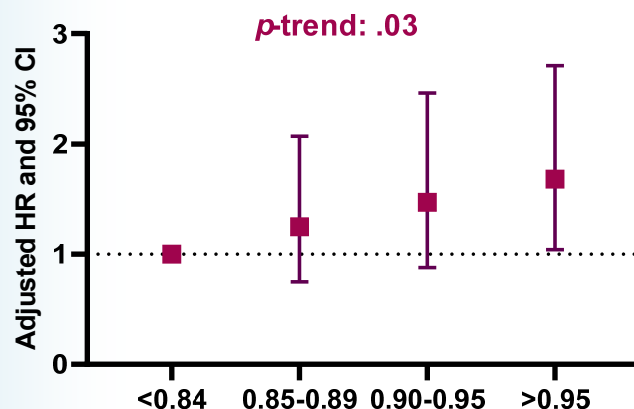
- R01CA185623
- R00MD01330
- K22CA251493

Selected Publications

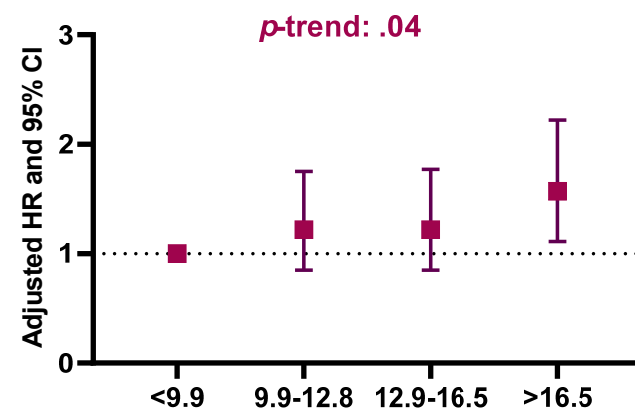
- Bandera, *JAMA Oncology* 2021

Major Discoveries

WHR and BC-Specific Mortality



Fat Mass Index and All-Cause Mortality



(Bandera, Qin, Zeinomar, Lin, Omene et al., *JAMA Oncology* 2021)

Obesity and Body Composition

Central obesity and higher fat mass associated with worse breast cancer-specific and overall survival among Black women

National Institute on Minority Health and Health Disparities (NIMHD)
Research Spotlight January 2022

Evaluating Risk, Survivorship, and Survival in a Cohort of Black Breast Cancer Survivors in New Jersey

AIM
1



Qin



Goldman



Omene
(CIPT)



Lin



Zeinomar



Bandera



Su
(CMI)



White
(CMI)

Shared Resources

- Biospecimen Repository/Histopathology
- Biomedical Informatics
- Biostatistics

Grants

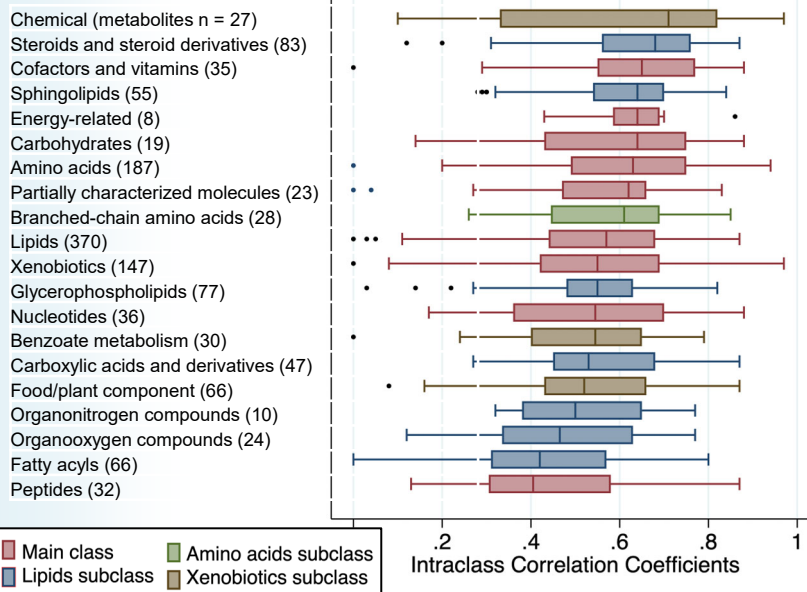
- R01CA185623
- R00MD01330
- K22CA251493

Selected Publications

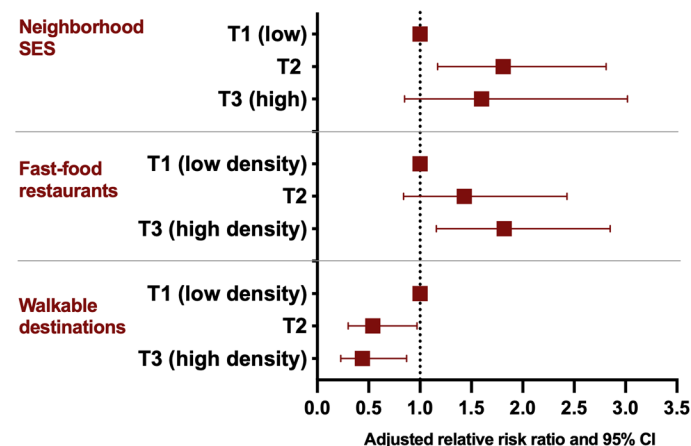
- Qin, *J Clinical Oncology* 2022

Major Discoveries

- **Place Matters:** Both neighborhood and individual characteristics associated with **weight gain** among Black breast cancer survivors
- **Metabolomics:** Plasma metabolites were found to have good temporal reliability over 1 year in this cohort



Neighborhood Factors and Weight Gain



(Qin, Goldman, Bandera et al., *J Clin Oncol* 2022)

NCI's Epidemiology and Genomics
Research Program
Research Highlight 2022

Translational Research: Impacting Public Health Policy



Delnevo



Villanti



Ganz



Wackowski



Jeong



Schroth



Hrywna



Chen-Sankey

Grants

- U54CA229973
- CPC Pilot grant
- New Investigator Award

Publications

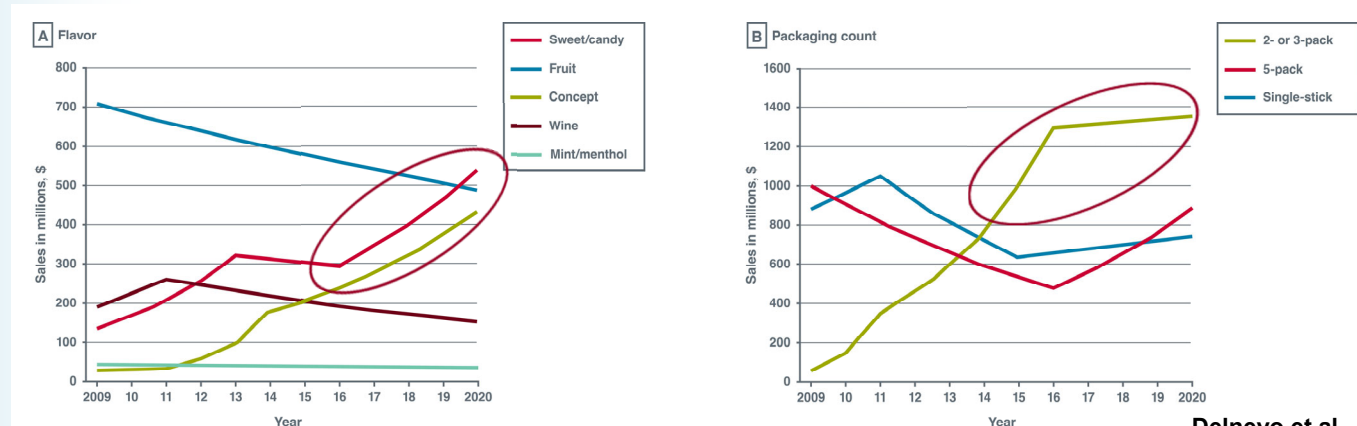
- Delnevo, *JAMA* 2021
- Delnevo, *JAMA Netw Open* 2020
- Delnevo, *Nicotine Tob Res* 2020
- Ganz, *Nicotine Tob Res* 2021
- Ganz, *Addictive Beh* 2022
- Schroth, *Public Health Rep* 2019
- Villanti, *Nicotine Tob Res* 2021

Major Discoveries

Flavored Cigars

- Flavors and small pack sizes drive cigar sales
 - Banned in cigarettes
 - Appeal to youth
- Flavored tobacco use
 - Disproportionately higher in people with depression or anxiety

Cigar Sales Trends Over Time by Flavor and Packaging in US Convenience Stores



Delnevo et al., *JAMA* 2021

Impact

FDA proposed rule to ban cigar flavoring

Catchment Area Priorities

Tobacco, lung cancer

Disparities Focus

Age and mental illness

Translational Research: Impacting Public Health Policy

AIM
2



Delnevo



Villanti



Ganz



Wackowski



Steinberg
(CIPT)



Schroth



Chen-Sankey



Jeong

Grants

- U54CA229973
- CPC Pilot grant
- New Investigator Awards

Publications

- Villanti, *JAMA Netw Open* 2022
- Delnevo, *Tob Control* 2022
- Delnevo, *JAMA Netw Open* 2020 & 2022
- Ganz, *Nicotine Tob Res* 2021
- Delnevo, *Nicotine Tob Res* 2020
- Schroth, *Public Health Rep* 2019
- Wackowski, *Nicotine Tob Res* 2018

Major Discoveries

Menthol Cigarettes

- 85% of smoking decline
 - attributed to nonmenthol cigarettes
- Gateway for youth smoking
- Disproportionately higher among
 - Black populations
 - SOGI minoritized groups
 - People with mental illness

Impact

FDA proposed rule to ban menthol



↑ Health Equity

↓ Tobacco-Related Disease and Death

Catchment Area Priorities

Tobacco, lung cancer

Disparities Focus

Underrepresented groups

Impactful Intervention Research

AIM
3



Kinney



Stroup



Lin



Toppmeyer
(CIPT)

Shared Resources

- Biostatistics

Grant

- R01CA211625

Publications

- Kinney et al., *JCO* 2023
- LeCompte et al., *Health Psychol Behav Med* 2022
- Kinney et al., *Contemp Clin Trials* 2018

Major Discoveries



- Novel population-based traceback approach
- Bilingual tailored tele-coaching/navigation
- NJ, CO, and NM registries
- 641 diverse breast or ovarian cancer survivors
- Equal impact for rural or Hispanic women

Impact

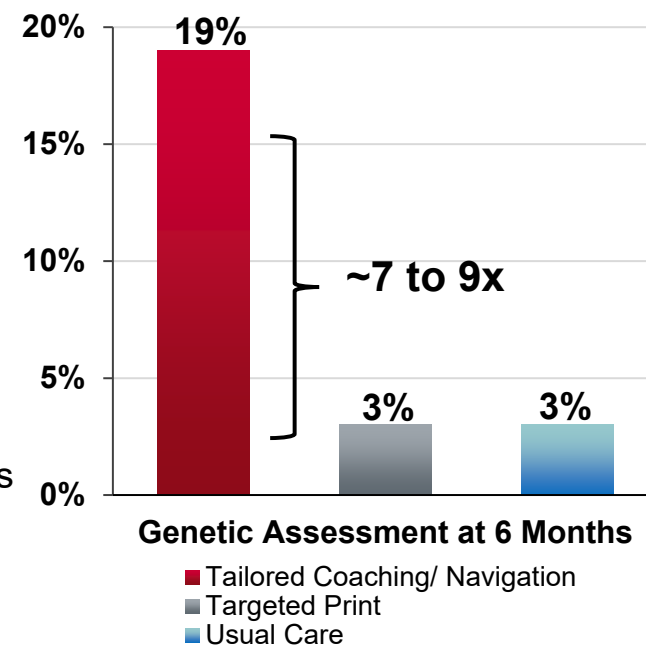
Shift to remote to reach more survivors

Catchment Area Priorities

Hereditary breast cancer

Disparities Focus

Diverse survivors



Kinney, et al., *JCO* 2023

Impactful Intervention Research

AIM
3



Manne



Heckman



Berger
(CIPT)



Ohman-
Strickland

Shared Resources

- CPODS

Grants

- R01CA264548
- R01CA171666
- R01CA221854
- R01CA204271
- R01CA244370

Publications

- Manne, *Ann Behav Med* 2022
- Manne, *Transl Behav Med* 2021
- Heckman, *BMC Public Health* 2021
- Manne, *Prev Med Rep* 2020

Major Discoveries



- Digital intervention RCT
- NJ melanoma survivors
- Improved skin self exam (and sun protection)
- New hybrid R01 study ongoing

Impact

Disseminable intervention to address recurrence

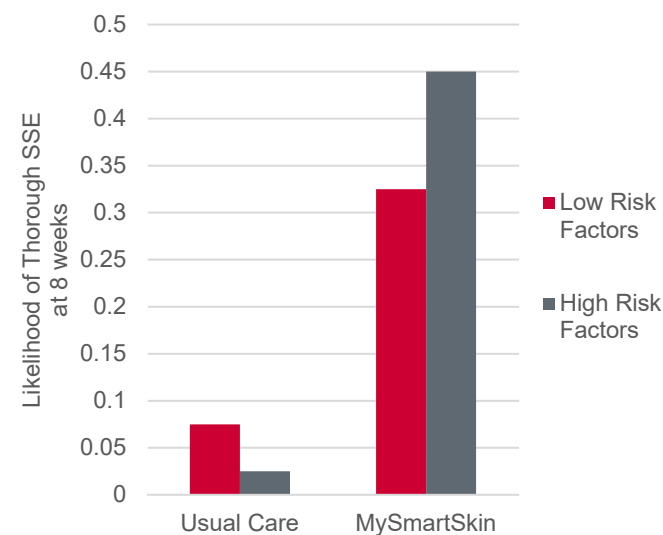
Catchment Area Priorities

NJ melanoma survivors

Disparities Focus

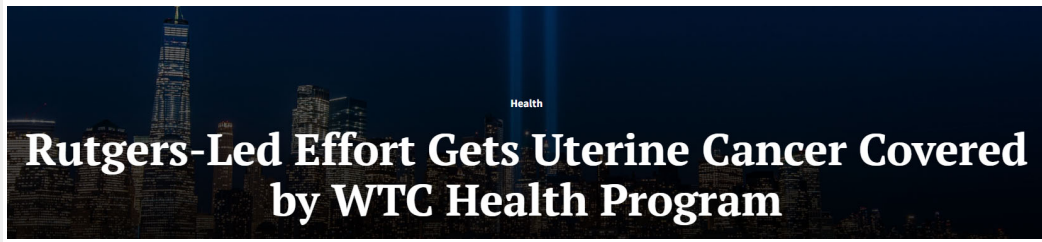
Prioritizing URGs in current recruitment

Likelihood of Thorough SSE



Manne, *Transl Behav Med* 2021

Scientific Impact on (Inter)National Public Health Policy



RUTGERS TODAY

Cristine Delnevo Appointed Chair of FDA Tobacco Products Scientific Advisory Committee



Clinical Review & Education



JAMA | US Preventive Services Task Force | RECOMMENDATION STATEMENT
Behavioral Counseling to Prevent Skin Cancer
US Preventive Services Task Force
Recommendation Statement



JNCI Natl Cancer Inst. (2021) 113(5): djaa083
doi: 10.1093/jnci/djaa083
First published online June 11, 2020
Commentary



Management of Cancer and Health After the Clinic Visit: A Call to Action for Self-Management in Cancer Care

American Cancer Society Guidelines on Nutrition and Physical Activity for Cancer Prevention

Furthering Catchment Area Responsiveness



Dr. Jaya Satagopan
(COE Liaison)



Science to Sidewalk
Dr. Shawna Hudson

CPC Research Projects

- **Cancer risk in volunteer firefighters** using CBP framework (Graber, Laumbach)
- Implementation Trial (NCI R01) for **breast cancer survivorship** in primary care (Hudson/Crabtree)
- **Prostate cancer** risk, screening, treatment, survival working group (Iyer, Jang, Kinney, Mitrofanova [GICG])

CPC Collaboration with COE

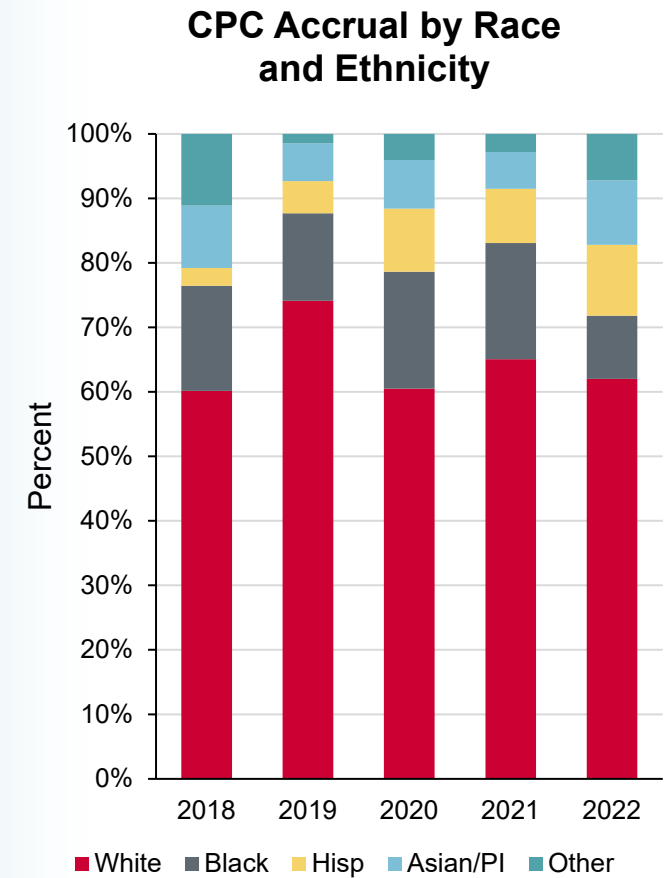
- Community Science Cafés, community newsletters, CCAB meetings, Science to Sidewalk videos, retreats
- **STRIDE data dashboard** – input into development, use to inform CA research
- **Community dissemination** of CPC findings relevant to CA priorities (e.g., nutrition and cancer)
- **CA and COE research integration activities**

CPC Bidirectional Communication with the Community

- Kinney (NCI R01): Reducing **genomic disparities among Black cancer patients**
- O'Malley (NCI R00): Identification of high-risk population to target **CRC screening**
- Kohler (NCI P30 supp, NCI K22): Addressing **HPV vaccination disparities** among Black families

Robust and Diverse CPC Accrual to Clinical Research

	INTERVENTIONAL		OBSERVATIONAL	
	2022	Past 5 years	2022	Past 5 years
Externally Peer-Reviewed	409	4,228	10,493	11,717
Institutional	45	574	96	3,314
Industry	34	68	10	111
Total	488	4,870	10,599	15,142



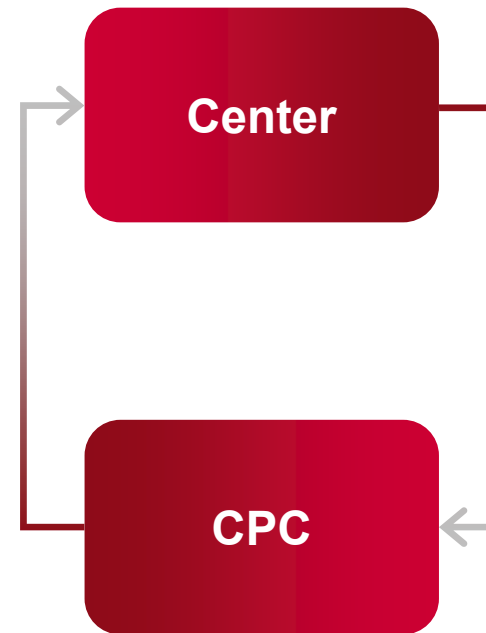
Mentoring the Next Generation of Diverse Cancer Researchers



TRAINEE TYPE	NCI FUNDING	LAST NAME
Junior Faculty	3 R00s 1 K99 2 K22s 3 K01s 3 K07s	George, O'Malley, Qin Niu Kohler, Zeinomar Jeong, Llanos, Wackowski Devine-Recuay, Plascak, Stapleton
Postdocs	R25 8 NJCCRs R01 Div Supp	PI Satagopan Fellows Sanchez-Diaz (PI: Bandera)
Grad, Med, and Fellows	R01 Div Supp 8 NIH Fs Faculty grants	Doose (PI: Bandera) Trainees Many
Undergrad High School	Consortium R25	e.g., Princeton summer interns Many from URGs (PI: Chaudhary)

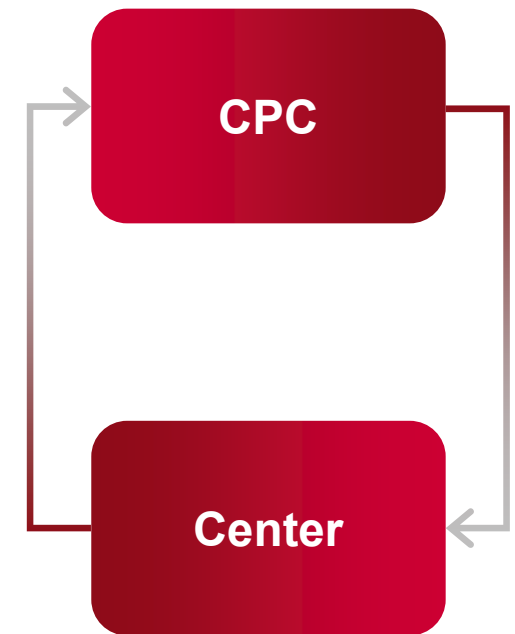
Value Added: Center to Program

- Center Administration research support
- Faculty Recruitment
- SEER NJ State Cancer Registry
- Shared Resources
- Developmental Funds
 - Pilot Awards
 - New Investigator Awards
- COE Resources and Services



Value Added: Program to Center

- Depth and breadth of transdisciplinary cancer research
- Serving the CA and addressing cancer burden
- Public health policy translation
- Implementation science portfolio
- Strong mentoring, education, and training
- Cancer Prevention and Outcomes Data Support (CPODS) SR
- Community engagement with COE
- Cohort of Black breast cancer survivors



Future Plans

1 Enhance translational research in three major areas:

- Discern **biological mechanisms of cancer susceptibility**
 - e.g., metabolomics, microbiome, genetics, inflammatory, metabolic, and immune factors
- **Translate observational findings** to community-engaged intervention and implementation science that inform policy and practice
- Implement health services research and risk-stratified prevention **leveraging clinical informatics**

2 Recruit and retain diverse faculty in key areas in collaboration with PED

3 Obtain additional center and multi-PI grants

- New tobacco U01- NOA June 2023 (\$11 M direct + \$7 M indirect)
- P30 and U54 under review
- U01 to be submitted June 2023

4 Enhance mentoring and training in collaboration with CRTEC

Submit a T32 training grant in next funding period. Working title:
“Advancing translational research in cancer health equity across the cancer control continuum”



Thank You

Q&A Segment



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