

# Tisch Cancer Institute 2017 Town Hall

**Steven Burakoff, MD**

September 26, 2017



**Mount  
Sinai**

# Dean for Cancer Innovation

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## **Steven Burakoff, MD**

- Director of Tisch Cancer Institute 2007-2017 (2015 NCI Designation)
- Director of NYU Cancer Institute (2000 - 2007)
- Chair of Pediatric Oncology at Dana-Farber Cancer Institute (1985- 2000)

## **Dean for Cancer Innovation – Responsibilities include:**

- Tisch Cancer Institute: Serve as advisor to new Director
- Mount Sinai Health System: Identify and foster innovative cancer research, treatment, and education; Advocate for new building
- Celgene Cancer Consortium – Represent Mount Sinai in this consortium with Columbia, U Penn, and Johns Hopkins
- Research in Cancer Immunotherapy – Continue laboratory research efforts in drug development in immunotherapy

# Tisch Cancer Institute at Mount Sinai

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# Tisch Cancer Institute at Mount Sinai

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Naming of Institute – 2008

Steven Burakoff named first TCI Director – 2008

NCI-Designation in 2015

Four Programs

- Cancer Immunology (CI)
- Cancer Mechanisms (CM)
- Liver Cancer (LC)
- Cancer Prevention and Control (CPC)

Four Shared Resources

- Flow Cytometry
- Mouse Genetics
- Microscopy
- Biostatistics

TCI Members: 143 with \$93M in cancer grant funding



# Tisch Cancer Institute

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- Membership
  - 143 Cancer Center Support Grant (CCSG) members
    - Members represent 22 Depts and 10 Institutes
- Administrative Units
  - Department of Oncological Sciences
  - Division of Hematology Oncology
  - Cancer Clinical Trials Office
  - Protocol Review and Monitoring Committee
  - Hematological Malignancies Tissue Bank
  - Center for Cancer Immunotherapies
  - Novel Therapeutics
  - Cancer Committee

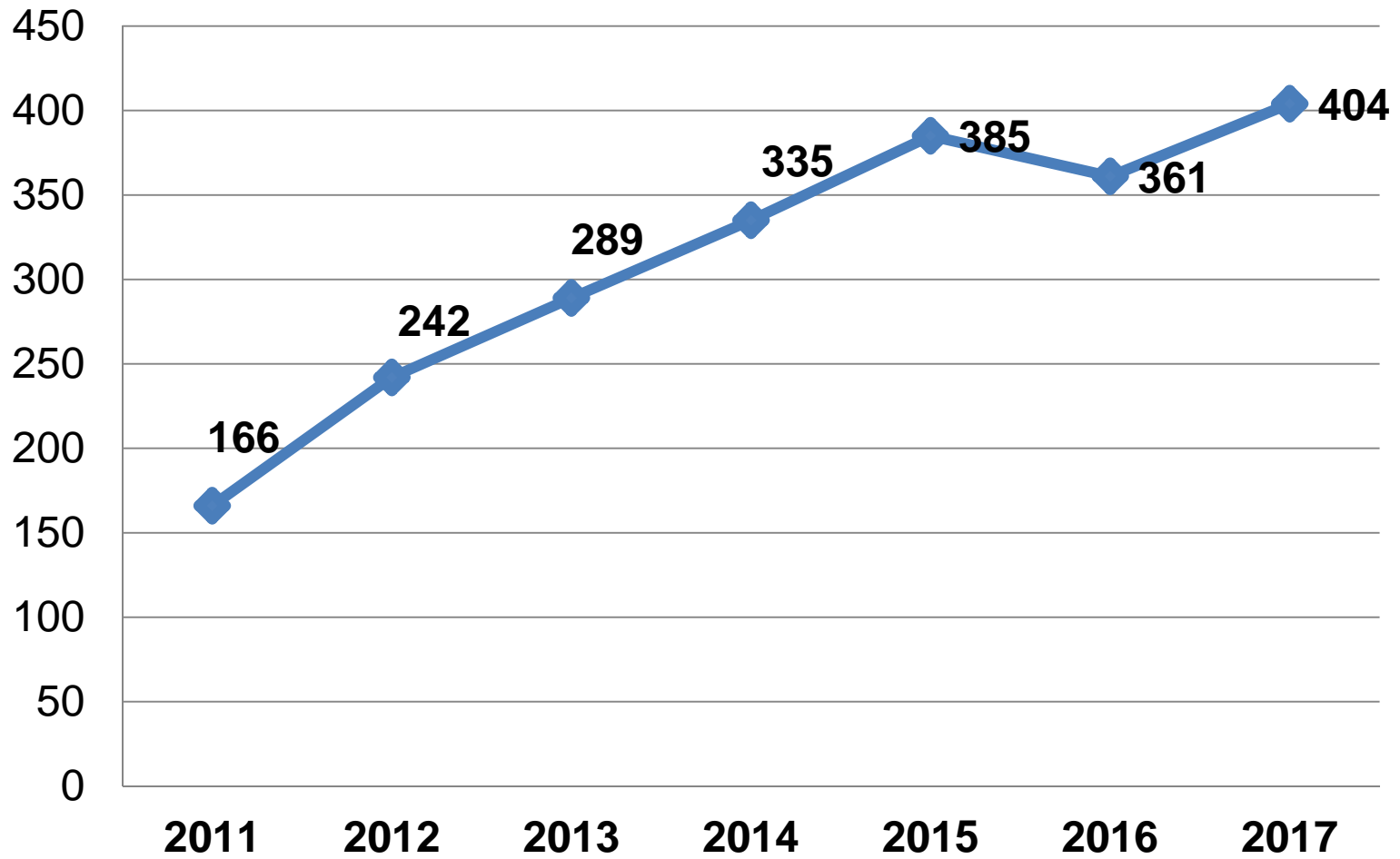
# 2017 NCI Ranking by Number of Grants

	ORGANIZATION	AWARDS	FUNDING
1	UNIVERSITY OF TX MD ANDERSON CAN CTR	191	\$90,239,871
2	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	176	\$91,695,429
3	SLOAN-KETTERING INST CAN RESEARCH	155	\$90,507,137
4	DANA-FARBER CANCER INST	149	\$93,803,778
5	JOHNS HOPKINS UNIVERSITY	148	\$64,647,626
6	UNIVERSITY OF MICHIGAN	137	\$62,008,553
7	STANFORD UNIVERSITY	130	\$58,302,692
8	UNIVERSITY OF PENNSYLVANIA	125	\$63,470,227
9	UNIV OF NORTH CAROLINA CHAPEL HILL	122	\$54,226,994
10	FRED HUTCHINSON CANCER CENTER	113	\$83,598,925
11	MASSACHUSETTS GENERAL HOSPITAL	106	\$49,552,989
12	UNIVERSITY OF PITTSBURGH	105	\$51,452,712
13	OHIO STATE UNIVERSITY	103	\$48,947,848
14	WASHINGTON UNIVERSITY	100	\$45,634,233
15	YALE UNIVERSITY	94	\$36,419,019
16	MAYO CLINIC ROCHESTER	92	\$63,617,693
17	NORTHWESTERN UNIVERSITY AT CHICAGO	90	\$40,066,773
18	DUKE UNIVERSITY	90	\$33,809,337
19	UNIVERSITY OF CALIFORNIA SAN DIEGO	84	\$37,395,368
20	COLUMBIA UNIVERSITY HEALTH SCIENCES	82	\$39,328,418
21	BAYLOR COLLEGE OF MEDICINE	78	\$36,885,858
22	UNIVERSITY OF MINNESOTA	78	\$31,113,694
23	NYU SCHOOL OF MEDICINE	74	\$29,653,139
24	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	73	\$29,537,709
25	UNIVERSITY OF COLORADO DENVER	71	\$22,723,147

ISMMS is currently #24 out of 596 (top 5%)

# Cancer Treatment Trial Accruals

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# Tisch Cancer Institute 2017 Town Hall

Ramon Parsons, MD, PhD

September 26, 2017

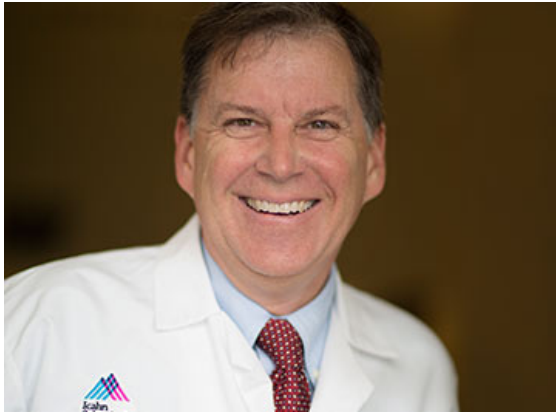


**Mount  
Sinai**



# Director

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## **Ramon Parsons, MD, PhD**

- Director, Tisch Cancer Institute
- Director, Mount Sinai Cancer, Mount Sinai Health System
- Chair of Oncological Sciences since 2013
- Research focus on identification of genetic and biochemical drivers of cancer, including breast and colon cancer

### Prior roles include:

- Deputy Director of the TCI since 2016
- Co-leader: Cancer Mechanisms Program (2013-2017)
- Program Leader of Columbia Cancer Center's Breast Cancer Program

### **TCI Director** – Responsibilities include:

- Oversee scientific development and encourage collaborations among TCI members
- Expand translational research
- Increase dedicated TCI space for basic, clinical and population science research
- Expand academic and clinical care for cancer throughout health system
- Work towards NCI Comprehensive status

# What is NCI-Designation?

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NCI-designated Cancer Centers are characterized by scientific excellence and the capability to integrate a diversity of research approaches to focus on the problem of cancer.



# Tisch Cancer Institute NCI Designation

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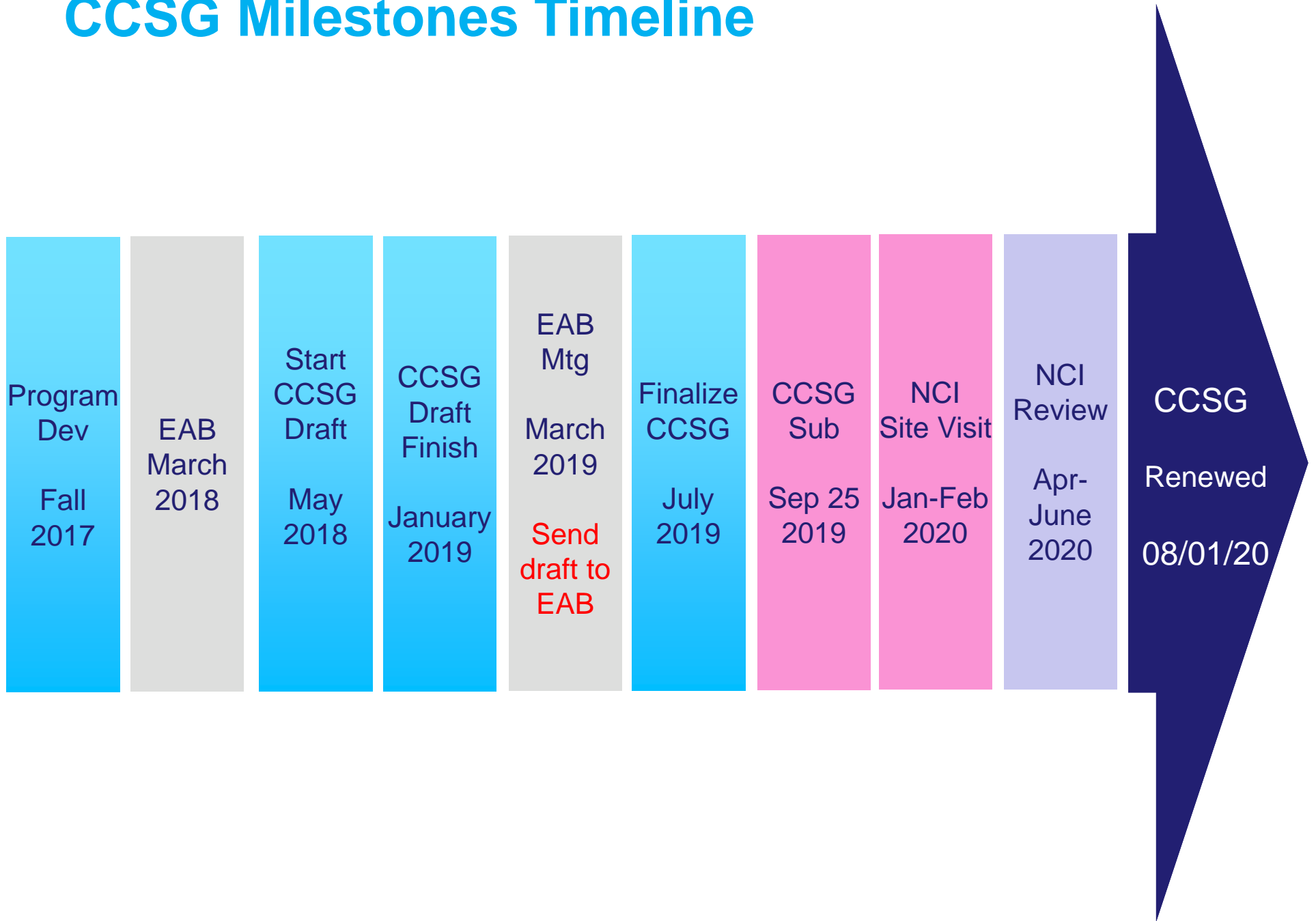
- Awarded August 1, 2015 – July 31, 2020 (5 years)
- \$1.4 million in Directs/year; \$973K in Indirects (competitive renewal could yield more)
- Provides support for
  - Shared Resources (including subsidies)
  - TCI supported facilities
- Provides \$200K for pilot awards per year
- Access to CCSG supplements

# Comprehensive Designation – NCI Guidelines

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- Depth and breadth of each of the 3 major areas:
  - a) Basic
  - b) Clinical
  - c) Prevention, Control & Population Science
- Effective in serving catchment area – through cancer research
- Integrate training and education into programmatic efforts (researchers and health care professionals)

# CCSG Milestones Timeline



# CCSG Award Amount Calculation: A Process in Flux

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- CCSG award amount will be affected by:
  1. Merit Score
  2. Size of TCI's NIH cancer grant portfolio

Example:

\$50M in cancer-related NIH funding

Score	Award Amount
10	11,750,000
20	5,875,000
27	1,762,500
28	1,400,000
30	1,400,000
36	1,120,000

# Tisch Cancer Institute Goals and Aspirations

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## **Become a top 20 NCI comprehensive cancer center**

- Maintain excellence in basic research
- Provide infrastructure for translational research
- Expand novel therapeutics
- Expand disparities and patient outcomes research
- Create disease-focused Centers of Excellence with P01s, SPOREs and other collaborative grants
- Provide outstanding care and access to clinical trials throughout the network and our diverse communities
- Train next generation of students and fellows
- Recruit and train physician-scientists that perform patient-based research (80/20) in Oncology, Pathology, Surgery, Radiology, RadOnc

# 5 Year Strategic Plan – Themes

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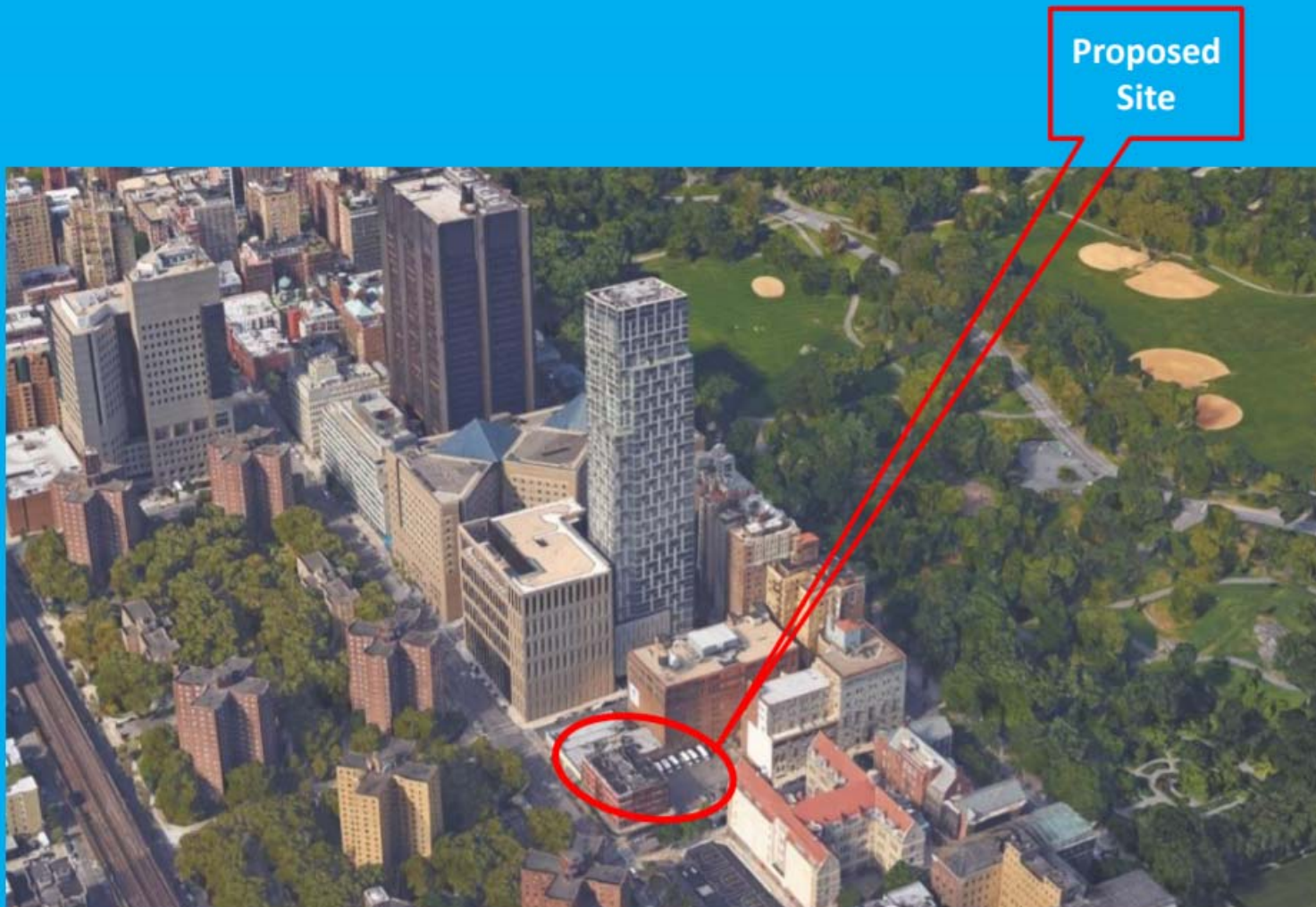
- Expand Population Science for Comprehensive Status
- Enhance Immunotherapy Research
- Development of Novel Therapeutics (Phase 1) Program
- Develop Predictive Genomics
- Develop Cancer Pathology Resources
- Expand Discovery Tools: Develop and Improve Cores
- Promote Careers in Immunotherapies and Translational Cancer

- **School and Hospital cancer commitment of \$207M**
- **Plans to build new research and clinical building**



# Strategic Plan 2017 - Proposal

New Life Science Center at 102-103 St and Madison Ave

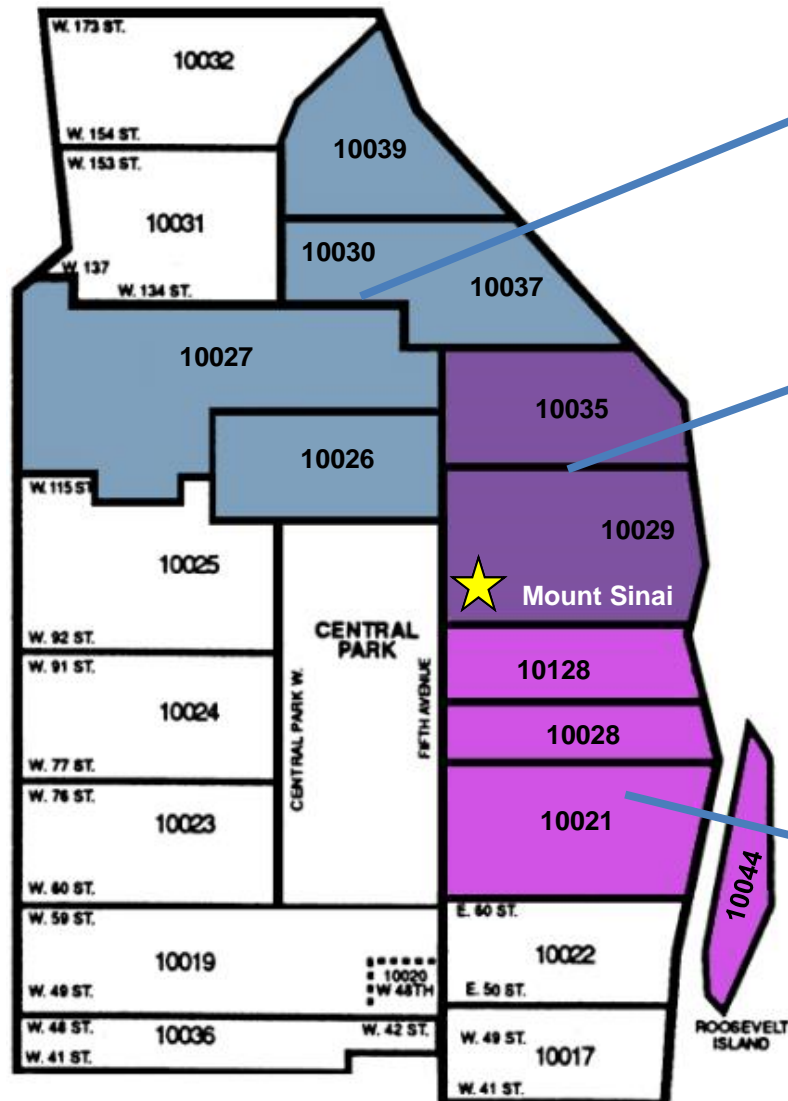


# Uniqueness of TCI Cancer Program

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- **Screening and early disease management**
  - Lung screening
  - HPV
  - GI screening
  - Hepatitis
  - Breast cancer (mammography van)
  - Prostate
  - Hematologic early disease
- **Unique catchment areas with high-mortality cancers**
  - Hepatocellular carcinoma
  - Triple negative breast cancer
  - Aggressive prostate cancer
- **Ongoing commitment to study the impact of environmental toxins**
  - Selikoff – Asbestos and mesothelioma
  - Landrigan – Lead-based paints
  - World Trade Center (WTC) First Responders' Program
- **Comprehensive Liver Cancer program**
  - Studies of HCV, HBV, alcohol, fibrosis-cirrhosis, and inflammation
  - Focus on at-risk populations in East and Central Harlem
- **Strength in Immunotherapy**
  - Broad-based faculty in Immunology
  - Developing approaches to overcome cancer-induced tolerance

# Cancers with Increased Incidence in Catchment Area



## Central Harlem

- HCC
- Larynx
- Prostate
- TN Breast
- (Obesity/Diabetes)

## East Harlem

- HCC
- Larynx
- (Obesity/Diabetes)

## World Trade Center Program

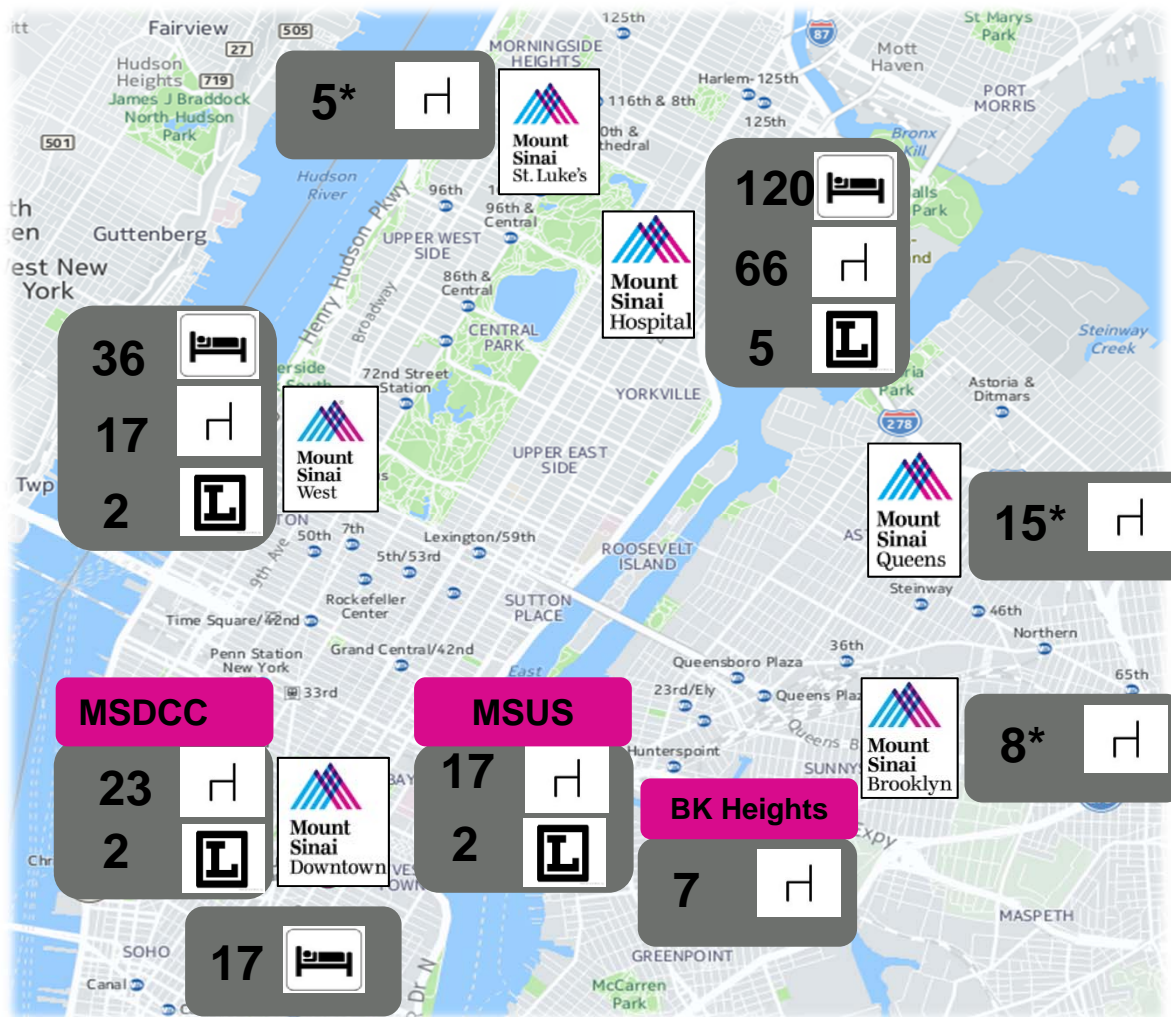


- All Cancers
- Prostate
- Thyroid

## Upper East Side

- Melanoma
- Head & Neck
- NHL
- MPD

# Location of Mount Sinai Cancer Services: MSHS Sites



## LEGEND



Dedicated medical oncology bed



Infusion chair



Linear Accelerator

\*Anticipated in 2018

Network Sites (not on map)

### MSHS

- MSD - Sheepshead Bay
- Mount Sinai Long Island
- Mount Sinai Chinatown
- Mount Sinai Jackson Heights

### Affiliates

- IMP-Long Island
- Hotel Trades (Manhattan, Queens, Midtown Manhattan)
- DOCs Yonkers
- Valley Hospital

# Deputy Director

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## **William Oh, MD**

- Deputy Director, Tisch Cancer Institute
- Chief, Division of Hematology and Med/Oncology
- Assoc. Director of Clinical & Translational Research
- Leading investigator in the use of systemic treatments for prostate cancer and other GU cancers
- Research focus on novel biomarkers and therapeutics in advanced prostate cancer
- Recruited from Dana Farber in 2009 to be the Chief of Hematology and Medical Oncology

## **TCI Deputy Director – Responsibilities include:**

- Work with other Associate Directors, Program Leaders and Core Directors to advance TCI goals and objectives
- Facilitate research across 4 programs to increase inter-programmatic collaborations, as well as interdisciplinary interactions between basic scientists and clinical investigators

# Mount Sinai Health System

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**Luis Isola, MD**  
**Director of Cancer Clinical Programs**  
**Mount Sinai Health System**



Merger between Mount Sinai Medical Center and Continuum Health Partners results in 3 additional cancer ambulatory care facilities:

- Beth Israel → Mount Sinai Chelsea & Mount Sinai Union Square
- Roosevelt Hospital → Mount Sinai West

Approximately 10,000 new cancer patients per year across the health system

Have begun process of integrating cancer clinical care and clinical trial offices:

- EPIC and Beacon implemented at all sites
- Disease Management Teams in place to standardize care
- All cancer clinical trials through Disease Focus Groups and PRMC
- 7 interventional multi-site trials now open

# TCI Associate Directors

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**Assoc. Director  
Basic & Translational  
Research  
Stuart Aaronson, MD**



**Interim Assoc. Director  
Clinical & Translational  
Research  
William Oh, MD**



**Assoc. Director  
Population Science  
Emanuela Taioli, MD, PhD**



**Assoc. Director  
Administration  
Sharon Mias, MPA**



**Assoc. Director  
Basic Science Shared  
Resources  
Jerry Chipuk, PhD**



**Assoc. Director  
Catchment Area &  
Community Engagement  
Nina Bickell, MD**



**Assoc. Director  
Training & Education  
Janice Gabrilove, MD**



**Assoc. Director  
Cancer Global Health  
Paolo Boffetta, MD, MPH**

# TCI Program Leadership

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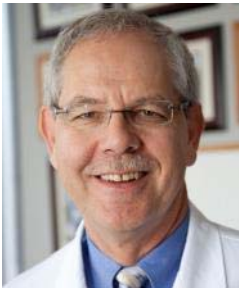
## **Cancer Prevention and Control**

Nina Bickell and Emanuela Taioli



## **Cancer Mechanisms**

Julio Aguirre-Ghiso and Ross Cagan



## **Liver Cancer**

Scott Friedman and Josep Llovet



## **Cancer Immunology**

Miriam Merad and Nina Bhardwaj



# TCI Shared Resources

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## **Flow Cytometry**

Jordi Ochando, PhD



## **Microscopy**

Deanna Benson, PhD



## **Mouse Genetics**

Kevin Kelley, PhD



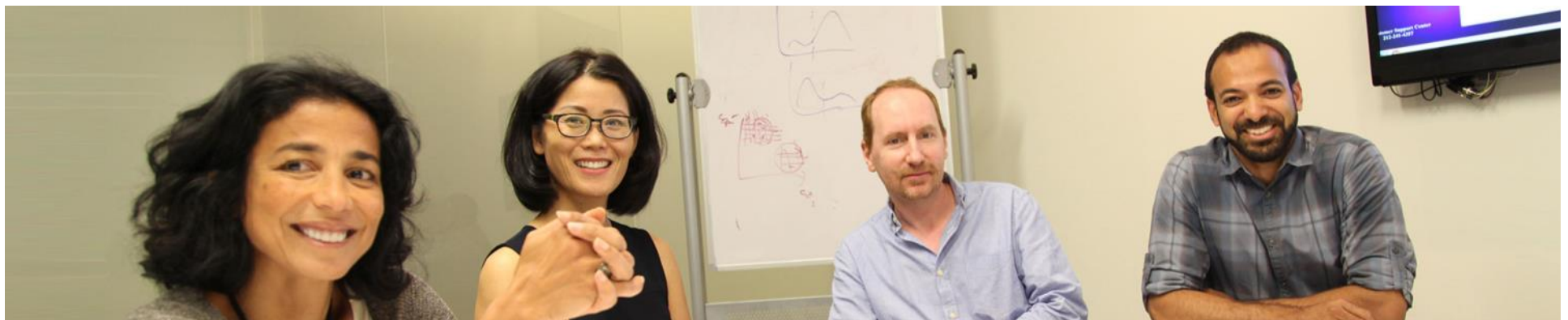
## **Cancer Biostatistics**

Madhu Mazumdar, PhD

# TCI Cores-in-Development

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- Computational Cancer Biology
- Human Immune Monitoring Center
- Heme Biobank
- Cancer Biobank



# New Laboratory Faculty Recruits

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Anne Bowcock, PhD – Cancer genomics and psoriasis  
(Imperial College London)



Ernesto Guccione, PhD – Methyltransferases in  
development and disease (Institute of Molecular and  
Cell Biology, Singapore)



Paz Polak, PhD – Cancer computational biology  
(Broad Institute)



Marta Luksza, PhD – Cancer computational biology  
(Institute for Advanced Studies, Princeton)

# TCI Clinical Research Team

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**Medical Director  
Cancer Clinical Trials  
Office  
Matthew Galsky, MD**



**Assoc. Medical Director  
Cancer Clinical Trials  
Office  
Ajai Chari, MD**



**Assoc. Medical Director  
Cancer Clinical Trials  
Office  
Paula Klein, MD**



**Admin. Director  
Cancer Clinical Research  
Lisa Gaynes, CCRP**



**Medical Director  
Data Safety &  
Monitoring Committee  
Max Sung, MD**



**Chair  
Protocol Review &  
Monitoring Committee  
Myron Schwartz, MD**



**Co-Chair  
Protocol Review &  
Monitoring Committee  
James Ferrara, MD**



**Admin. Director  
Protocol Review &  
Monitoring Committee  
Jennifer Cocco**

# New Clinical Leadership

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**Medical Director  
Ruttenberg Treatment Center  
Che-Kai Tsao, MD**



**Director  
Head & Neck Cancer  
Clinical Research  
Krzysztof Misiukiewicz, MD**



**Director  
Leukemia Program  
John Mascarenhas, MD**



**Director  
Novel Therapeutics Program  
Matthew Galsky, MD**

# New Quality Clinical Leadership

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**Director of Quality  
Cancer Services  
Cardinale Smith, MD, PhD**



**Assoc. Director  
Oncology Quality and  
Surgical Oncology  
Umut Sarpel, MD, MSc**



**Assoc. Director  
Oncology Quality and  
Informatics  
Aarti Bhardwaj, MD**



**Assoc. Director  
Oncology Quality and  
Radiation Oncology  
Manjeet Chadha, MD, MHA**

# New Clinical Faculty Recruits

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Amy Chan, MD – Neuro-oncology (Yale)



Colleen Edwards, MD – Hematology (Mount Sinai Hospital)



Matko Kalac, MD, PhD – Lymphoma (Columbia)



Nicholas Rohs, MD – Solid tumor; lung (MS Beth Israel)



Rajwanth Veluswamy, MD – Population science; early lung screening (Mount Sinai Hospital)

# Faculty Searches

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- Leukemia
- GI
- Lung
- Multiple Myeloma
- Novel Therapeutics
- Immunotherapies
- Organoids



# New Positions for Catchment-Based Outreach and Research

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## **Nina Bickell – Associate Director, Catchment Area Research**

- Help ensure TCI's research contains catchment-relevant research
- Establish partnerships with other healthcare delivery systems and state and community agencies for dissemination of evidence-based findings

## **Lina Jandorf – Director, Office of Community Engagement**

- Lead effort in community outreach and engagement
- Engage catchment area population in cancer screenings and clinical trials



# New Position for Global Oncology

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## **Associate Director for Global Oncology: Paolo Boffetta**

- Collaborate with Dean for Global Health: Phil Landrigan
- Collaborate with Director of Arnhold Institute for Global Health
- Better understand cancer incidence and disparities on a global level
- Expand international cancer epidemiological research
- Potential to grow program in global health

# New Behavioral Oncology Center in Pop Health Science & Policy

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- Division of Cancer Prevention & Control in Oncological Sciences moving to Population Health Science & Policy as Behavioral Oncology Center
- Guy Montgomery, MD – Center director



## Faculty:

Lina Jandorf  
William Redd  
Julie Schnur  
Jamila Sly  
Sarah Miller  
Heiddis Valdimarsdottir  
Joel Erblich  
Gary Winkel



# Behavioral Oncology Center Mission

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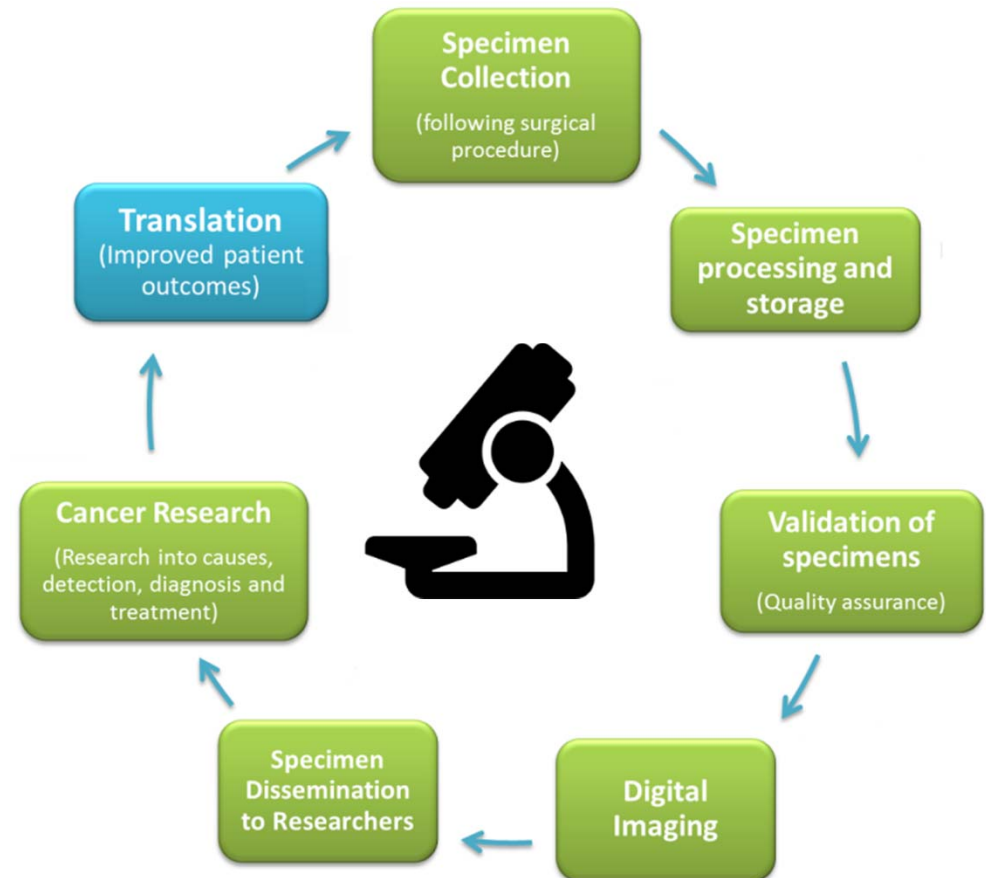
- Researching wellness solutions
  - Developing and testing behavioral and mind-body interventions for issues including:
    - symptom and side-effect management in cancer patients and survivors
    - promoting adherence to cancer screening and treatment
    - addressing modifiable behavioral risk factors for cancer
    - examining benefits of online and mobile therapy interventions in cancer
    - working to understand psychosocial and cultural factors which influence individuals' experiences of cancer and its treatment
- The Center's efforts span the cancer continuum, from prevention through survivorship, and include outreach to the community, to patients, and to psychosocial cancer care providers across the nation.
- The Center is an important component of the Tisch Cancer Institute's goal to achieve NCI Comprehensive Cancer Center status.



# New Position for TCI Cancer Biobank

## Director of TCI Cancer Biobank: *Currently recruiting*

- Lead efforts to generate accessible samples for research
- Will also co-lead the biobank for the Precision Immunology Institute at the Icahn School of Medicine (PrIIISM)
- Staffing for consenting, tracking, processing, and **distribution**
- Demonstrate utilization and papers; integrate into grant funding



# Novel Therapeutics Program Update

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- ✓ Establishing infrastructure
  - “Open unit”
  - Single point of contact for referrals (Zoe Andrada, NP: [Zoe.Andrada@mssm.edu](mailto:Zoe.Andrada@mssm.edu))
  - Resources identified and SOPs being drafted for extended observation and late PK
  
- ✓ Improving efficiency
  - SOPs for “fast track” for first-in-human trials being finalized in collaboration with PRMC and IRB
  
- ✓ Expanding portfolio
  - Established pilot trial funding mechanism
    - 2 concepts funded
  - 10 trials currently enrolling
  - 5-10 trials in pipeline (PARP inhibitor + temozolamide, PARP inhibitor + PD-L1 inhibitor, CD40L, anti-AXL antibody, etc)

## Expanding Universe of Investigator-Initiated Trials at TCI (partial listing of >44 active or pending trials....)

Title	PI
Phase II study of galunisertib in patients with myelofibrosis	Mascarenhas
A pilot, cross-over design study of the combination of 5-azacitadine (5-AZA) and All-trans retinoic acid (ATRA) in patients with recurrent prostate cancer (PCa) with rising PSA	Oh/Aguirre-Ghiso
Prostate Cancer Intensive Non-Cross Reactive Therapy (PRINT)	Liaw
A multi-center phase Ib/II trial of nivolumab/ipilimumab-primed immunotransplant for relapsed/refractory, transplant-ineligible DLBCL patients	Brody
Intratumoral poly-ICLC for high risk localized prostate cancer	Bhardwaj/Tewari
Gemcitabine, cisplatin, plus nivolumab for muscle-invasive bladder cancer with biomarker-based bladder sparing	Galsky
A phase I/II trial of leflunomide in women with triple negative breast cancer	Shapiro/Parsons
Randomized phase II trial of gemcitabine, carboplatin, plus nivolumab versus gemcitabine, oxaliplatin, plus nivolumab in patients with metastatic urothelial cancer: a clinical-translational study focused on exploiting immunogenic cell death	Galsky
Circulating tumor cell-based PDX models as a platform for probing platinum-resistance in urothelial cancer	Galsky/Domingo-Domenech
Personalized Cancer Therapy for Patients with Metastatic Medullary Thyroid Cancer, Colorectal Carcinoma, and an Exploratory Cohort	Misiukiewicz/Cagan
Phase I Study of Single Agent Oral RG7388 in Patients with Polycythemia Vera and Essential Thrombocythemia	Mascarenhas
Phase I Open Label Study of PGV001 a Multi-peptide Therapeutic Vaccine Platform for the Treatment of Solid Tumors in the Adjuvant Setting	Bhardwaj



# 2017 Therapeutic Clinical Trial Accrual (MSH)

Disease Team	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
<b>Solid Tumor</b>	<b>18</b>	<b>5</b>	<b>14</b>	<b>11</b>	<b>22</b>	<b>29</b>	<b>18</b>	<b>16</b>	<b>133</b>
Brain/Neuro-Surgery	3	0	0	1	0	1	0	0	5
Breast /*Surgery	5	1	4	2	3	7	2	6	30
GI/*Radiology	1	0	0	2	0	1	0	0	4
Liver/*Radiology	0	1	1	0	3	0	3	0	8
GU/Prostate/*Urology	3	0	4	2	6	7	7	3	32
*GYN	0	0	1	0	0	0	1	0	2
Head & Neck/*Rad Oncology	2	1	2	3	7	7	4	4	30
Sarcoma/Melanoma/Skin/Vaccine	2	0	2	0	2	0	0	0	6
Thoracic/*Preventive Medicine	0	0	0	0	0	0	0	0	0
Phase I	2	2	0	1	1	6	1	2	15
<b>Hem Malignancies</b>	<b>9</b>	<b>9</b>	<b>19</b>	<b>18</b>	<b>27</b>	<b>20</b>	<b>20</b>	<b>14</b>	<b>136</b>
BMT	1	3	3	3	7	6	2	3	28
Leukemia	2	1	0	0	1	0	2	1	7
Lymphoma	0	0	0	4	3	0	2	1	10
MDS	2	1	3	2	1	2	2	2	15
MPD	1	0	5	0	0	2	4	1	13
Multiple Myeloma	3	4	6	8	14	10	8	6	59
*Pediatrics	0	0	2	1	1	0	0	0	4
<b>Total</b>	<b>27</b>	<b>14</b>	<b>33</b>	<b>29</b>	<b>49</b>	<b>49</b>	<b>38</b>	<b>30</b>	<b>269</b>

# TCI Events and Educational Forums

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- **TCI Seminar Series**

(Tuesdays @Noon; formerly Onc Sci Seminar)

Includes:

- Frontiers in Oncology Seminar 4x/year
- Postdocs & trainees presentations 12x/year

- **Translational Cancer and Hematology Seminars**

(Fridays @Noon; formerly Hem Onc Seminar)

Includes:

- Clinical Trials Science Seminars 6x/year
- Nodal seminars across programs 12x/year

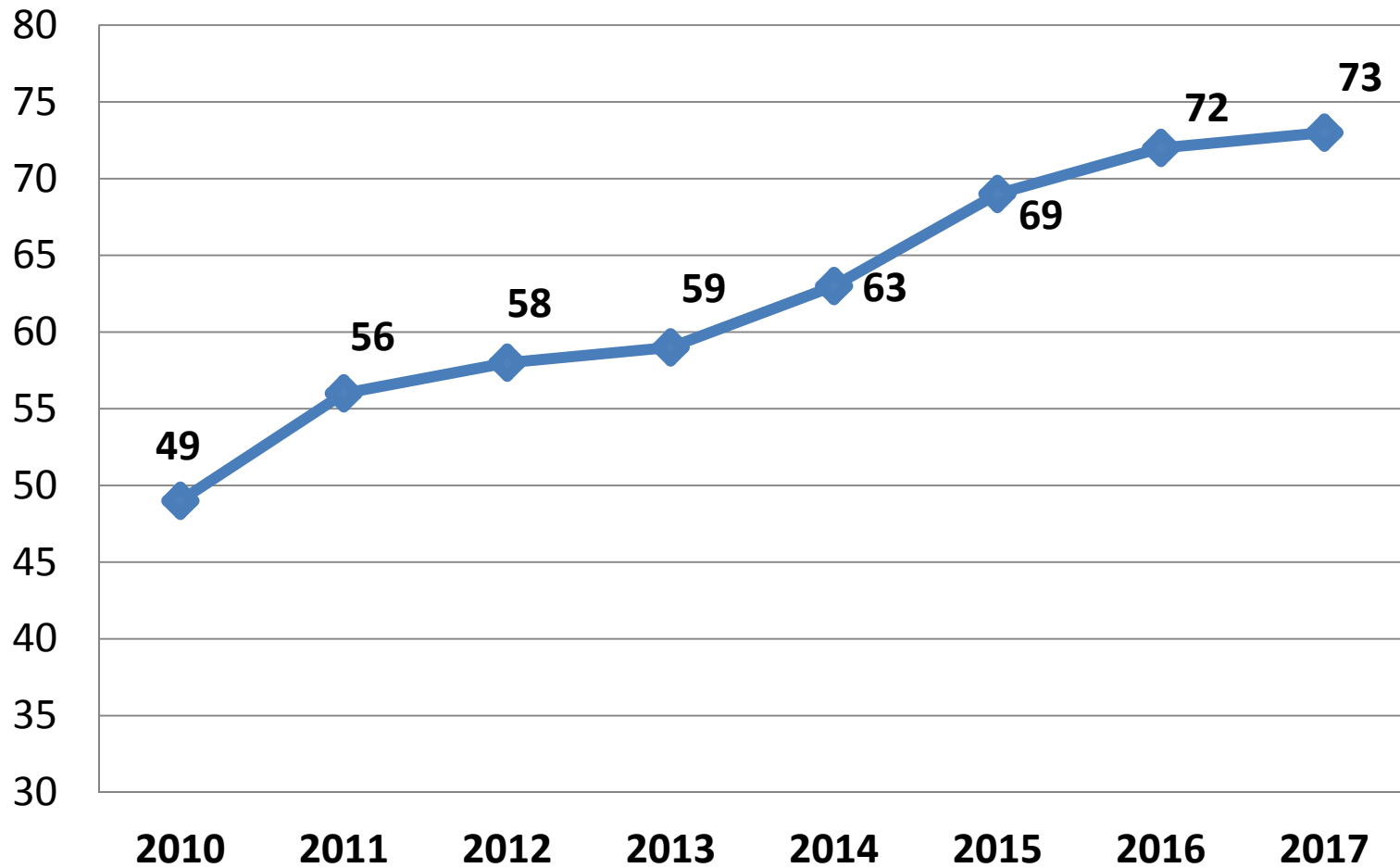
- **Joint CPC and Epi Institute Seminar Series**

Includes:

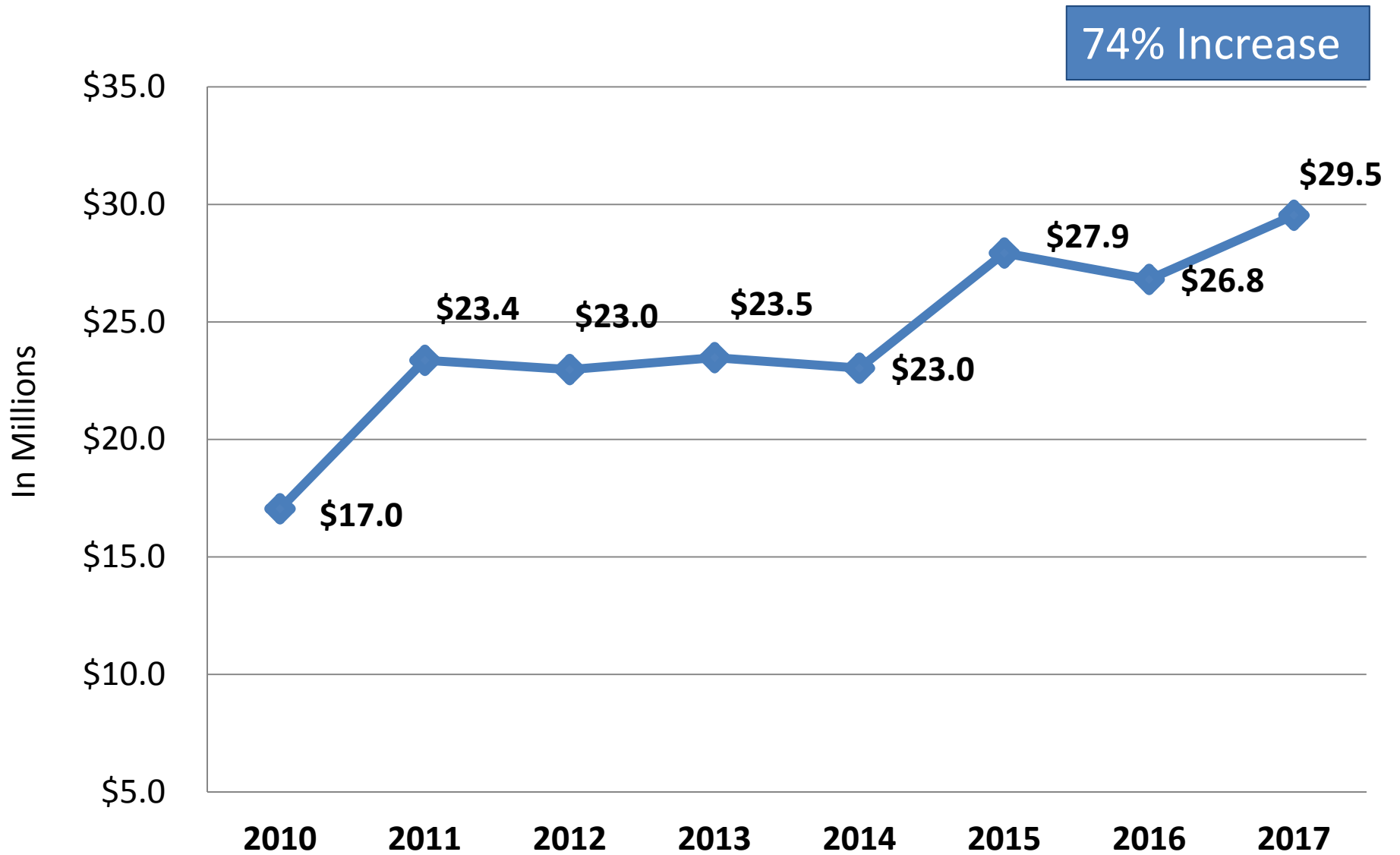
- CPC Seminars 6x/year
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# Number of NCI Grants Awarded to ISMMS

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# Total NCI Dollar Amount Awarded to ISMMS



# TCI Needs Your Help

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- Cite TCI grant (P30CA196521) in your pubs and grants
- Use “cancer” in your grant and pub titles
- Collaborate with other TCI investigators (across disciplines, depts, institutes, etc)
  - Involve Cancer Biostatistics early in research
- Focus on diseases affecting TCI catchment area (Central and East Harlem; Upper East Side, WTC)
- Consider mentoring students/trainees
- Inform Public Relations ([Marlene.Naanes@mountsinai.org](mailto:Marlene.Naanes@mountsinai.org)) of pending papers

**Please Register!**



# **SINAInnovations**

*Leading a New Era of Discovery*  
Cancer

**October 17-18, 2017**  
Stern Auditorium  
1468 Madison Avenue



## **Mount Sinai Health Hackathon**

**Theme: Cancer**

**October 13-15, 2017**

Davis Conference Center  
1470 Madison Avenue, New York, NY 10029

**Thank you**