

# My Public Health Journey into Pharma

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# Disclaimer

The content and views expressed in this presentation are solely mine and are not representative of my current or past employers.

# Penn and Journey into Public Health



2008 – PhD, Cell & Molecular Biology  
(Gene Therapy & Vaccines)



**gapsa**



Penn Graduate Women in  
Science & Engineering



**HARVARD**  
**T.H. CHAN**

SCHOOL OF PUBLIC HEALTH

2009 – Master of Public Health  
(Quantitative Methods)



**NATIONAL CANCER INSTITUTE**

Cancer Prevention Fellowship Program

Jefferson  
College of  
Population  
Health

**Genentech**  
*A Member of the Roche Group*



## FELLOWSHIP

Application and Program Information

## SUMMER CURRICULUM

Courses, Lectures, and Faculty

## COLLOQUIA

Scientific Lecture Series

## ABOUT US

Who We Are and What We Are About



### Who We Are

The Cancer Prevention Fellowship Program is a multidisciplinary postdoctoral program that trains future leaders in the field of cancer prevention and control. [Watch the CPFP Video](#) that highlights unique features of the CPFP through testimonials from current fellows and alumni, remarks from the former director, and reflections from the Director of the Division of Cancer Prevention, NCI.

### Postdoctoral Fellowship Program

Outstanding opportunities for cutting-edge research in the basic, quantitative, social and behavioral sciences, and in clinical cancer prevention, have been the hallmarks of the CPFP since its inception.

[Description](#) | [Eligibility](#) | [Application Guidelines](#)

The application period for the 2019 Cancer



### Program Spotlight: Drs. Loomans-Kropp and Pierre-Victor

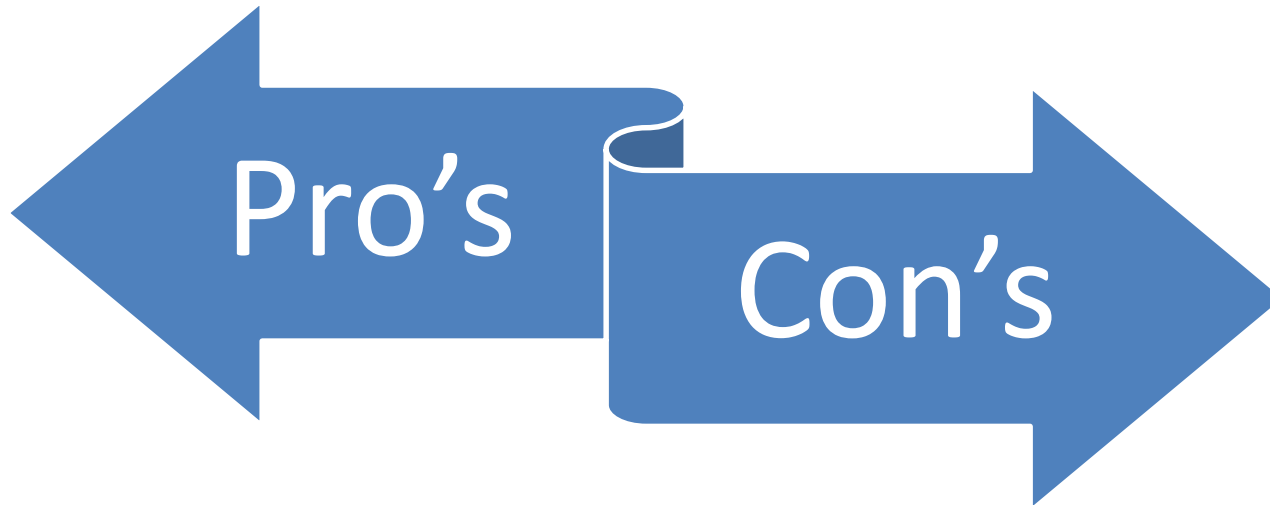


Current CPFP fellow Dr. Holli Loomans-Kropp, recently published a review in *Precision Oncology* titled "Cancer prevention and screening: the next step in the era of precision medicine." In February 2019, current CPFP fellow Dr. Dudith Pierre-Victor published a study, "Association of Nonadherence to Cancer Screening Examinations with Mortality from Unrelated Causes: A Secondary Analysis of the PLCO Cancer Screening Trial" in *JAMA Internal Medicine*. [Learn more about](#)



NATIONAL CANCER INSTITUTE

Cancer Prevention Fellowship Program



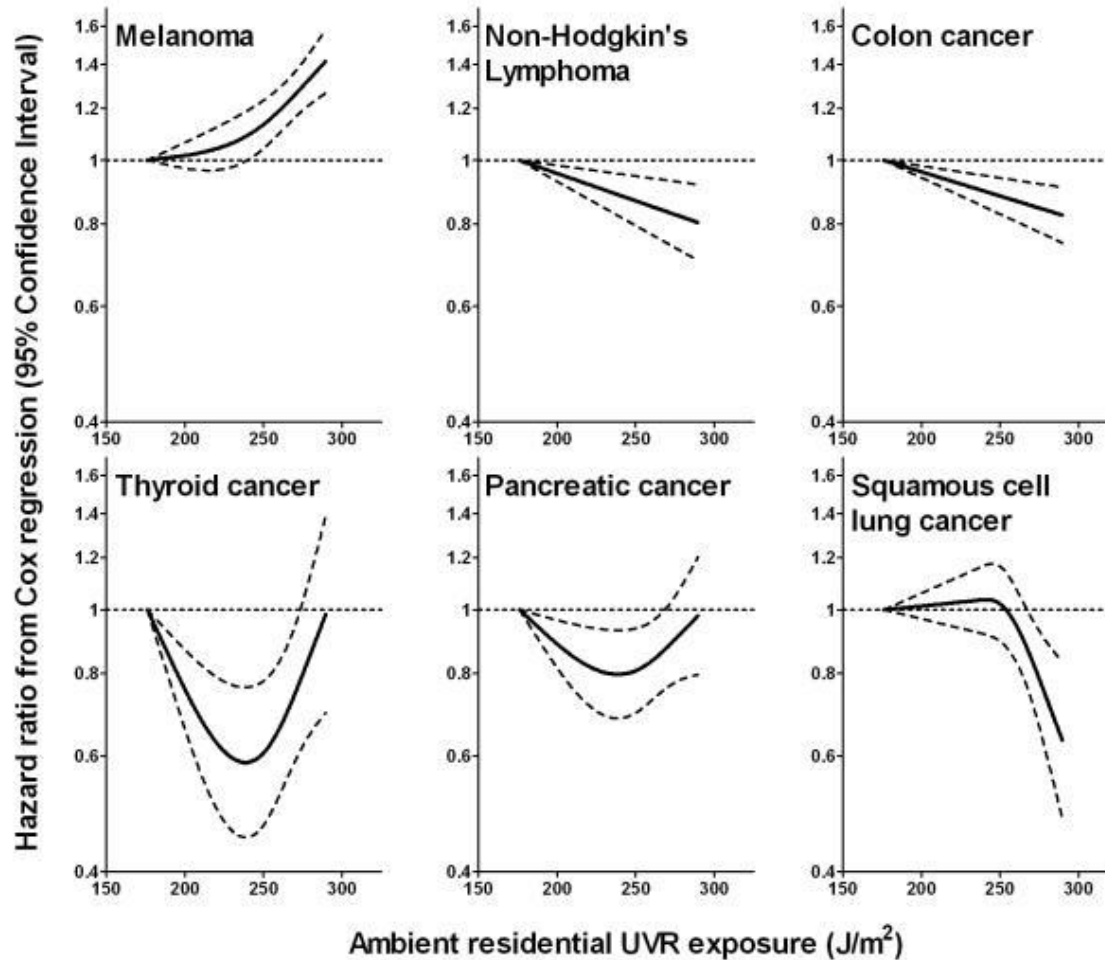
- Dedicated training office
  - Teaching, grant writing
- PIs focused on research
  - No teaching
  - No grants
  - Mentoring?
- Lots of data and collaboration
- Access to program directors
- Stipend and benefits

- Grant ineligibility
- Fewer teaching opportunities
- Government restrictions on:
  - Travel
  - Political activities
  - Side projects/hustles
- Limited exposure of PIs to “outside world”

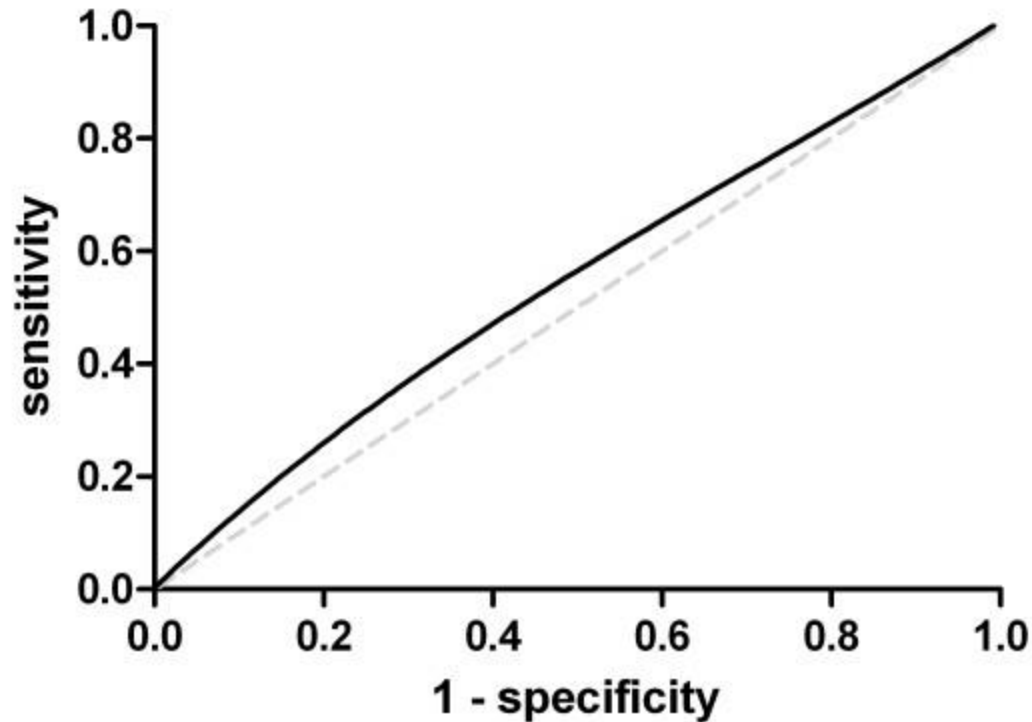




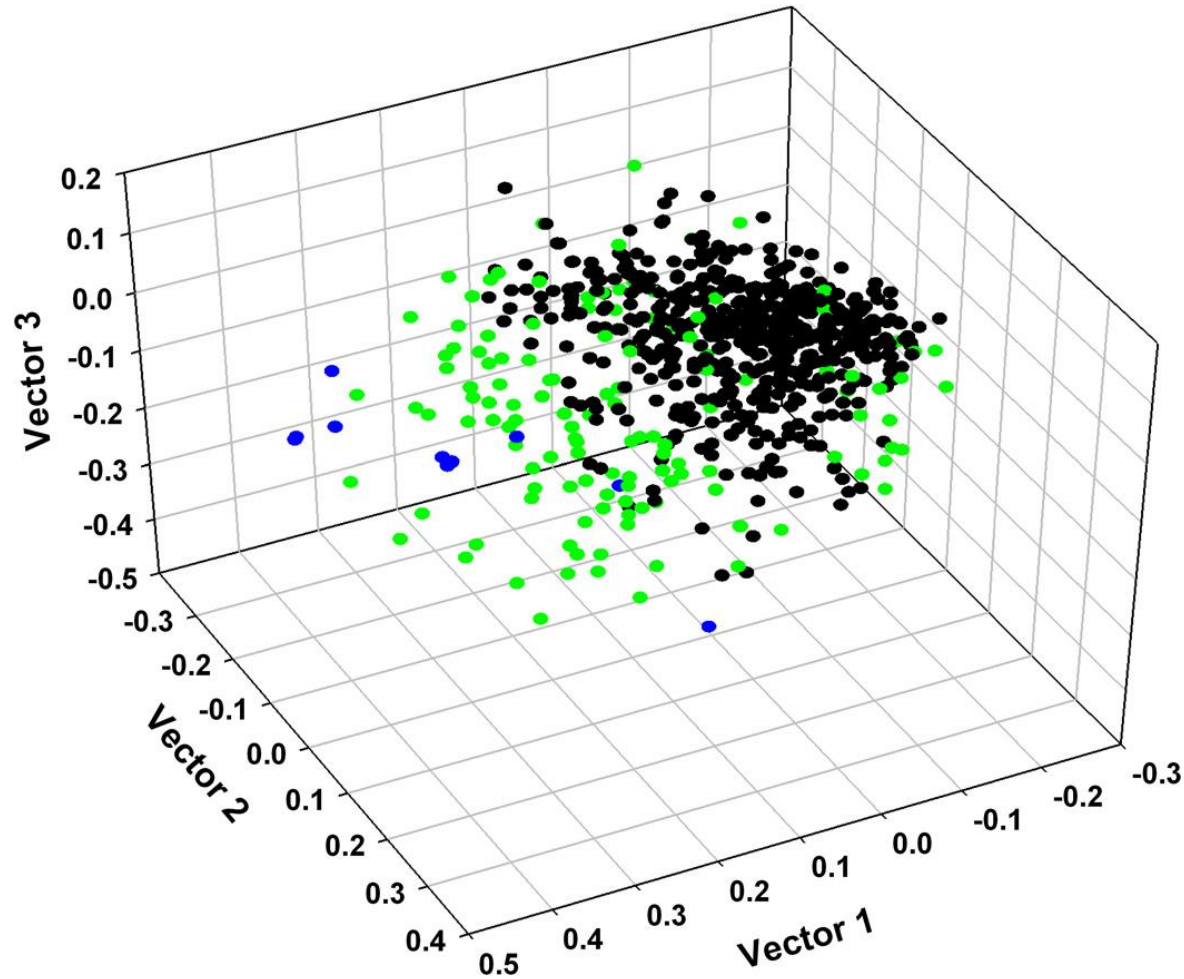
**NATIONAL CANCER INSTITUTE**  
Cancer Prevention Fellowship Program



**Prospective study of ultraviolet radiation exposure and risk of cancer in the United States.** *Int J Cancer.* 2012 Sep 15; 131(6): E1015–E1023.

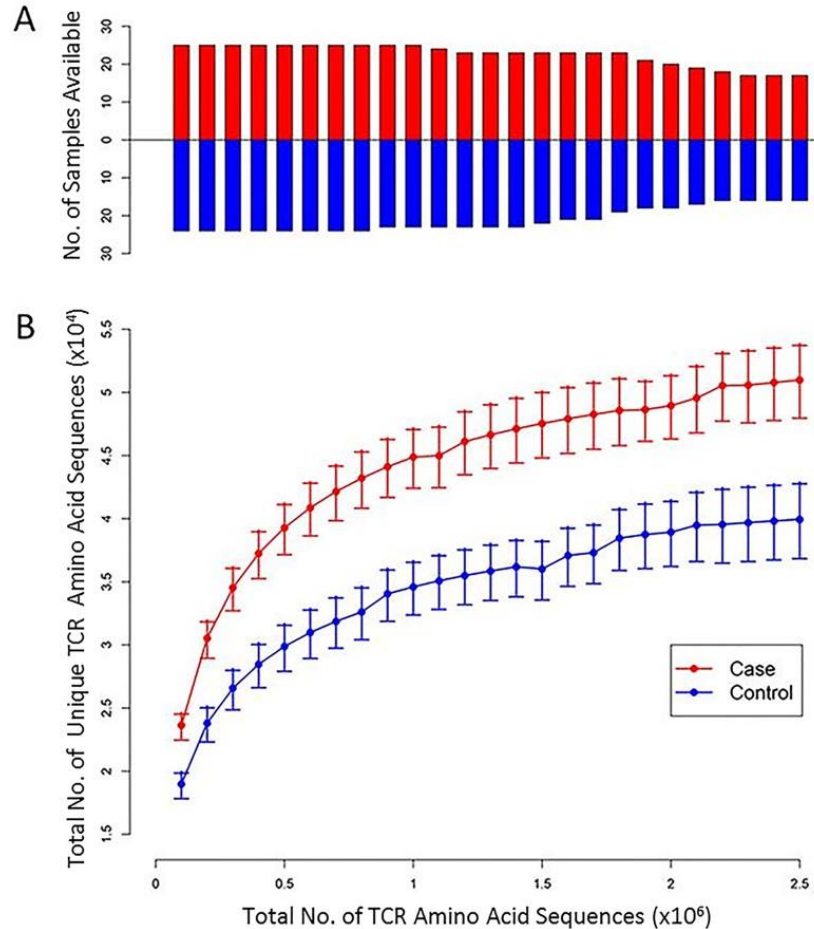


**Measuring telomere length for the early detection of precursor lesions of esophageal squamous cell carcinoma. BMC Cancer. 2013; 13: 578.**



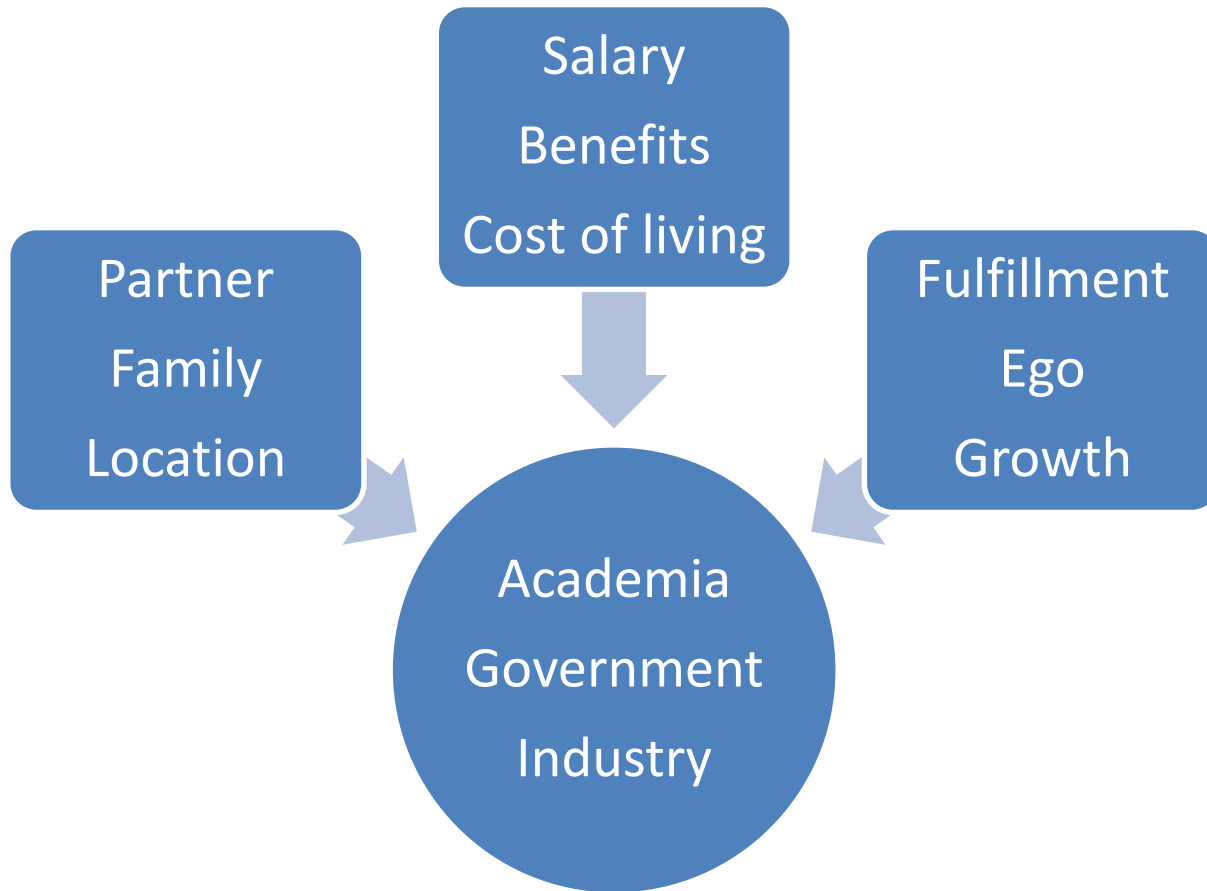
**Beta-diversity metrics of the upper digestive tract microbiome are associated with body mass index. Obesity (Silver Spring). 2015 Apr; 23(4): 862–869.**





**T cell receptor repertoire among women who cleared and failed to clear cervical human papillomavirus infection: An exploratory proof-of-principle study.**  
PLoS One. 2018; 13(1): e0178167.

# Considerations for post training



# Applicable skills and experiences

## Science

- Interdisciplinary science: epidemiology, molecular bio
- Technical skills: programming, large databases
- Evidence: publications/presentations

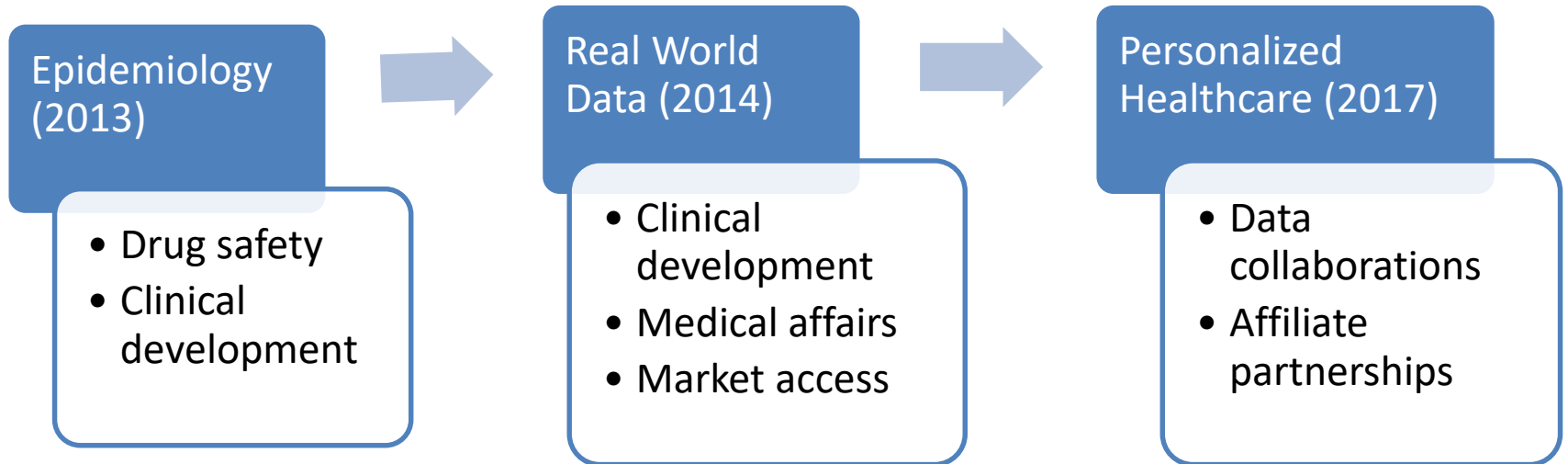
## People

- Teams: research and non-research
- Collaborations: initiated and inherited
- Communications: multiple disciplines

## Process

- Project management: timelines and budget
- Communication: emails, presentations, networking
- Deciphering and following regulations

Recent keywords: real world data, data science, machine learning, omics, data analytics on imaging, omics, and digital health data, informatics



What am I looking for now?

- Growth opportunities – new expertise, challenges, relationships
- Manager focused on development/mentoring
- People management opportunities
- Culture of trust, flexibility, and effective use of technology

# Public Health-relevant roles and activities

## Development

- Clinical development
- Safety / pharmacovigilance

- Literature reviews
- Benefit-risk assessment
- Natural history studies

## Medical Affairs

- Registries
- Phase IV
- Safety studies

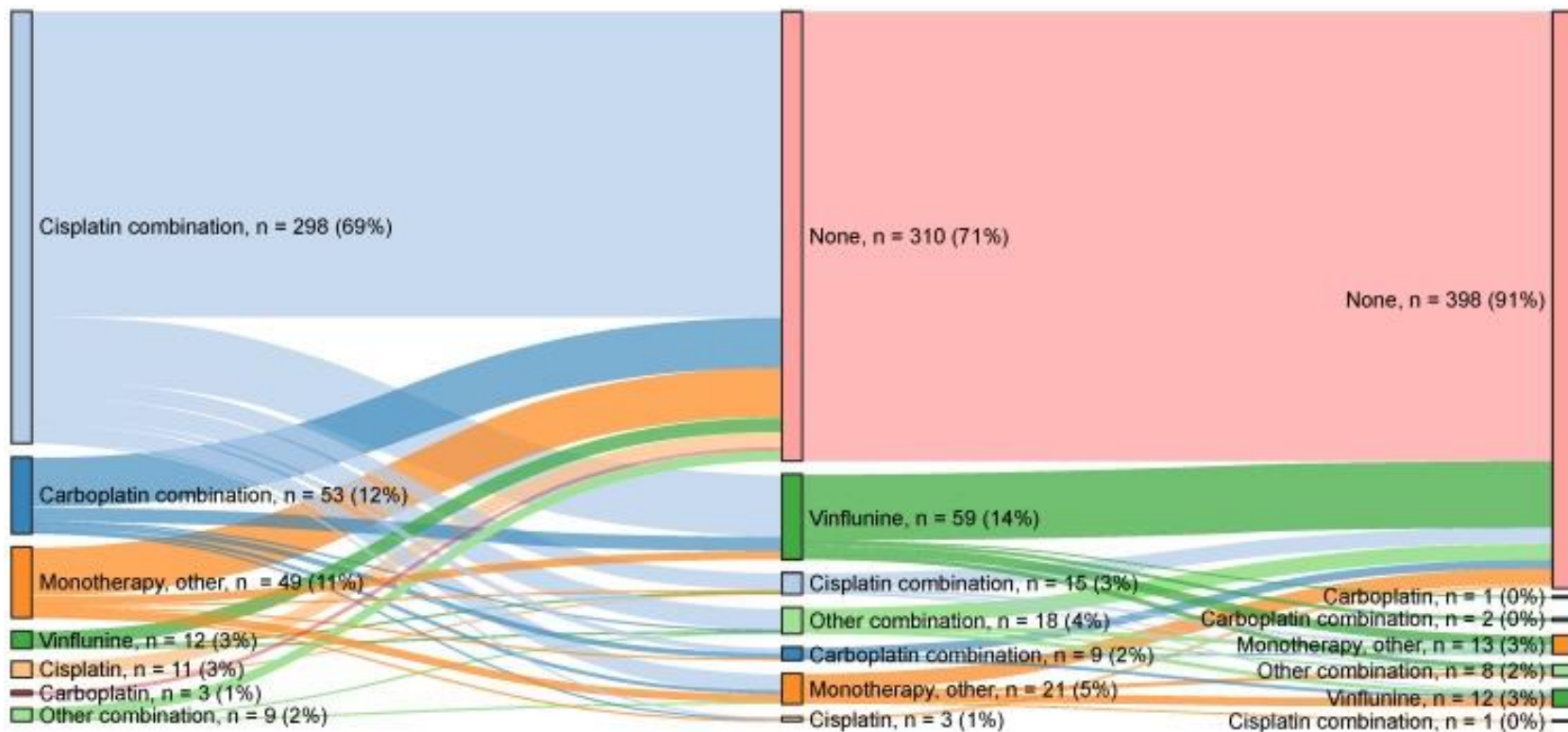
- Patterns of care analyses
- Retrospective and prospective studies

## Commercial

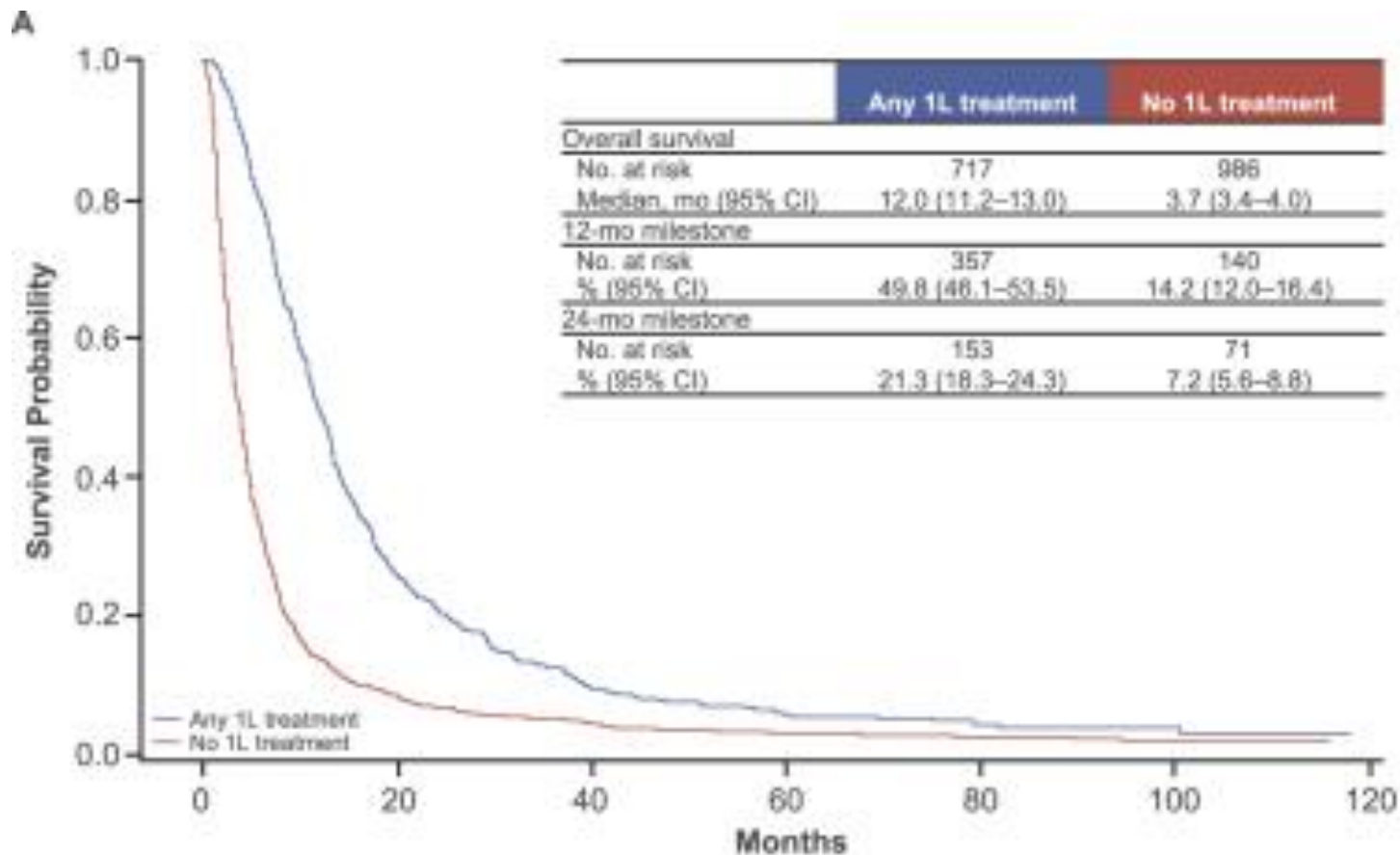
- Forecasting
- HEOR
- Evidence synthesis
- Commercial insights analytics

- Comparative effectiveness
- Modeling
- Meta-analyses
- Data mining

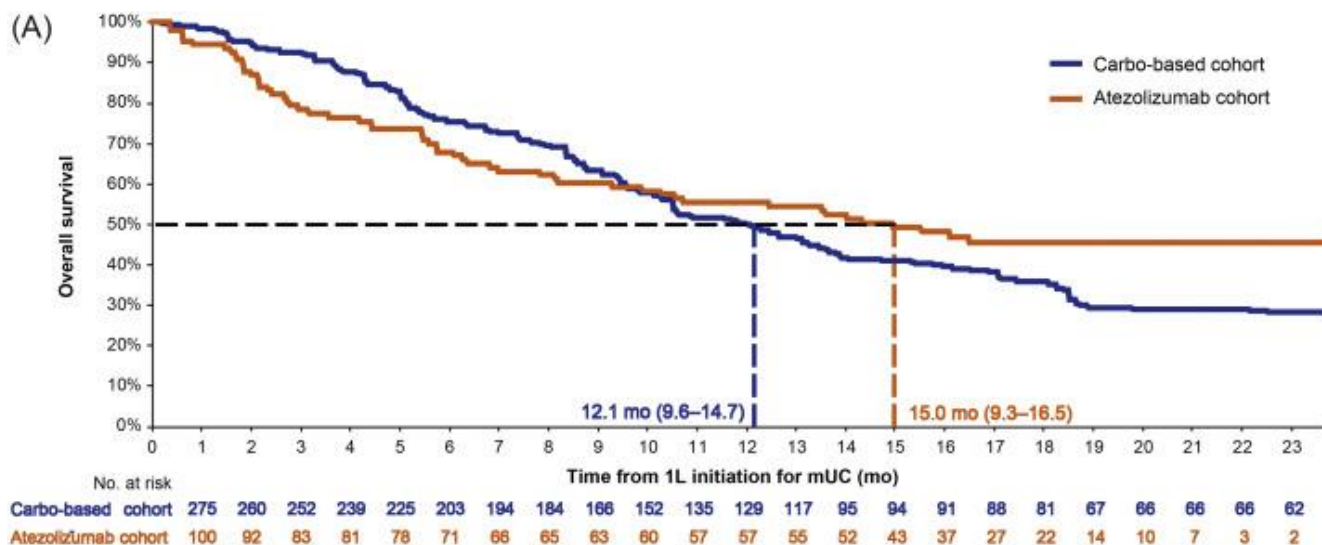




**A Real-World Data Study to Evaluate Treatment Patterns, Clinical Characteristics and Survival Outcomes for First- and Second-Line Treatment in Locally Advanced and Metastatic Urothelial Cancer Patients in Germany. J Cancer. 2018; 9(8): 1337–1348.**



**Real-World Effectiveness of Chemotherapy in Elderly Patients With Metastatic Bladder Cancer in the United States. *Bladder Cancer*. 2018; 4(2): 227–238.**



(B)

	Postindex events and milestone OS rates						
	3 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo
<b>Atezolizumab, IMvigor210</b>							
Patients with events, <i>n</i>	23	34	42	47	53	56	56
OS rate, %	78.4	68.0	60.3	55.5	49.3	45.4	45.4
95% CI	69.3–85.1	58.2–76.0	50.3–68.9	45.5–64.4	39.4–58.5	35.3–54.9	35.3–54.9
<b>Carbo-based, VHA</b>							
Patients with events, <i>n</i>	26	78	110	143	163	176	193
OS rate, %	92.4	75.4	63.3	49.5	41.2	36.0	27.0
95% CI	86.8–95.7	67.4–81.7	54.7–70.8	40.7–57.6	32.6–49.5	27.7–44.3	19.4–35.2

**Comparative Effectiveness of Non-cisplatin First-line Therapies for Metastatic Urothelial Carcinoma: Phase 2 IMvigor210 Study Versus US Patients Treated in the Veterans Health Administration.** *Eur Urol Oncol.*2019 Feb;2(1):12-20.

Just launched! [www.womeninpharmacareers.com](http://www.womeninpharmacareers.com)



## Women in Pharma Careers

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### Our Interview on the Married to Doctors Podcast!

Wenny • April 19, 2019 • [Leave a comment](#)

Michelle and I were interviewed a few months ago on the [Married to Doctors podcast](#) [↗](#). We had a blast chatting with podcast host Lara McElderry about our training and career journeys in the context of having spouses who also have challenging and demanding professional obligations.

CONNECT

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# Last thoughts and contact

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