

## WHAT IS PRECISION MEDICINE? IS IT THE CURE TO CANCER THERAPY?

*Presented by:*

**JUE WANG, MD, FACP**

*Professor of Medicine and Interdisciplinary Oncology  
The University of Arizona Cancer Center at Dignity  
HealthSt. Joseph's Hospital and Medical Center  
Jue.Wang@DignityHealth.org*





# WEBINAR HOUSEKEEPING

## WELCOME

*All lines have been muted.*

*Please type any questions into the chat or Questions panel and we will do our best to answer them all at the end.*

*All handouts and a copy of the presentation slides are available in the Handouts panel.*

*Please complete the survey that will be emailed out after the presentation*

*A recording will be added to the library of HAWP webinars on our website within 48 hours.*

*Special thanks to our supporting partner Dignity Health for their generous support in making this webinar possible.*



**Q&A**

**PLEASE ENTER YOUR  
QUESTIONS IN THE CHAT.**

*HEALTHYAZWORKSITES.ORG*

# Precision Medicine: Science and Art.

Jue Wang, MD, FACP  
Professor of Medicine and  
Interdisciplinary Oncology  
The University of Arizona Cancer Center  
at Dignity Health St. Joseph's Hospital  
and Medical Center

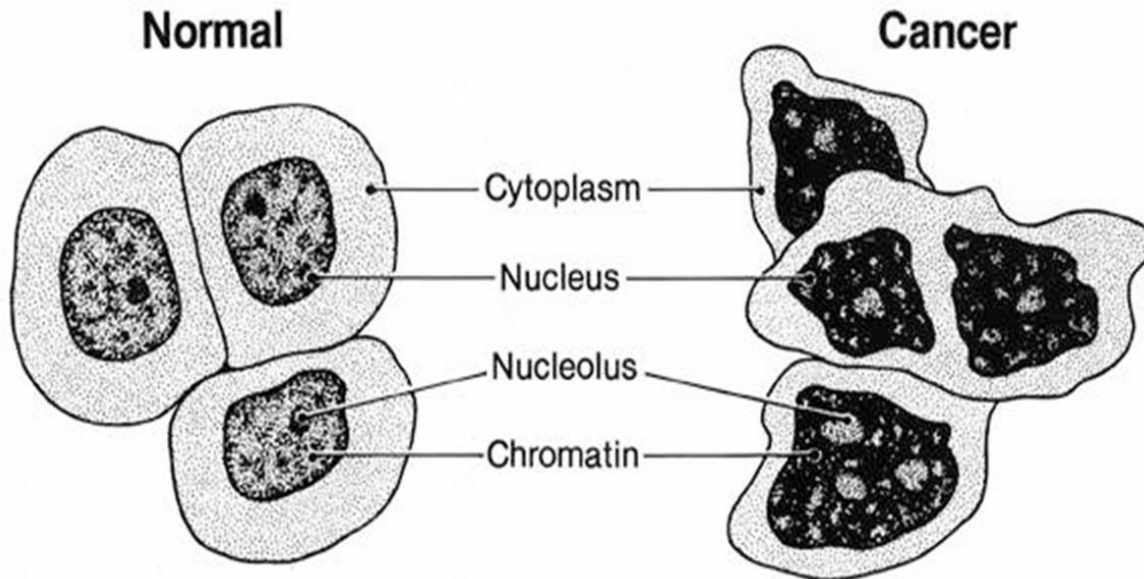


# Overview

- ❑ Traditional vs. Precision Medicine: How They Differ
- ❑ How Does Precision Medicine Work?
- ❑ How Can Precision Medicine Help?
- ❑ What Are the Benefits of Precision Medicine?

# Histological Diagnosis of Cancer

## Normal and Cancer Cells Structure



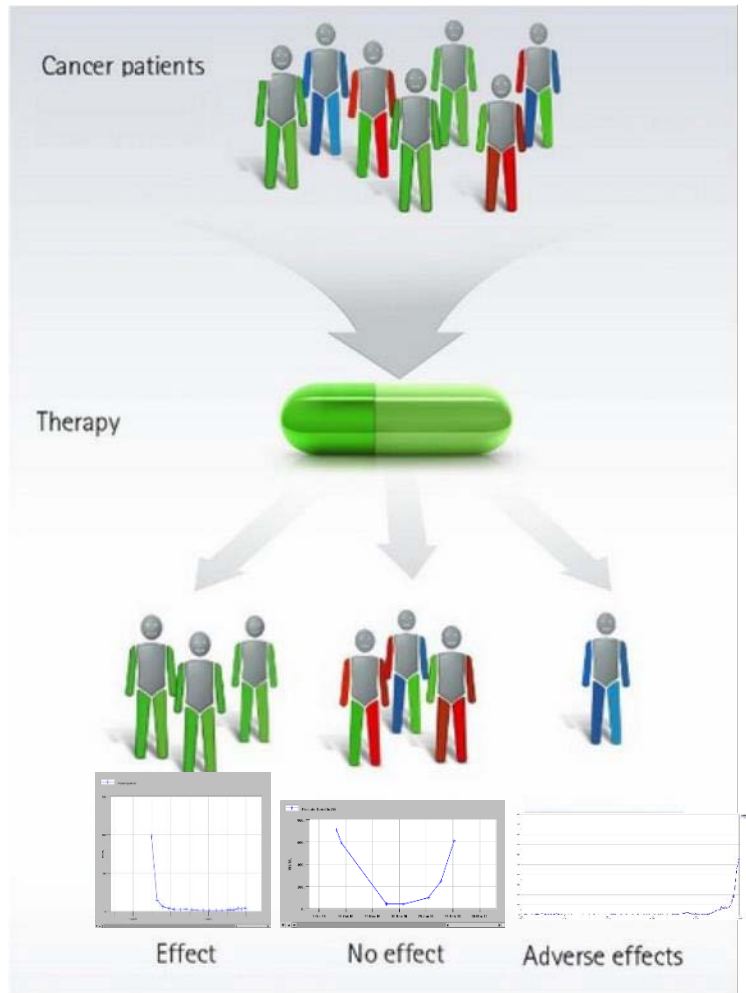
- Large cytoplasm
- Single nucleus
- Single nucleolus
- Fine chromatin

- Small cytoplasm
- Multiple nuclei
- Multiple and large nucleoli
- Coarse chromatin

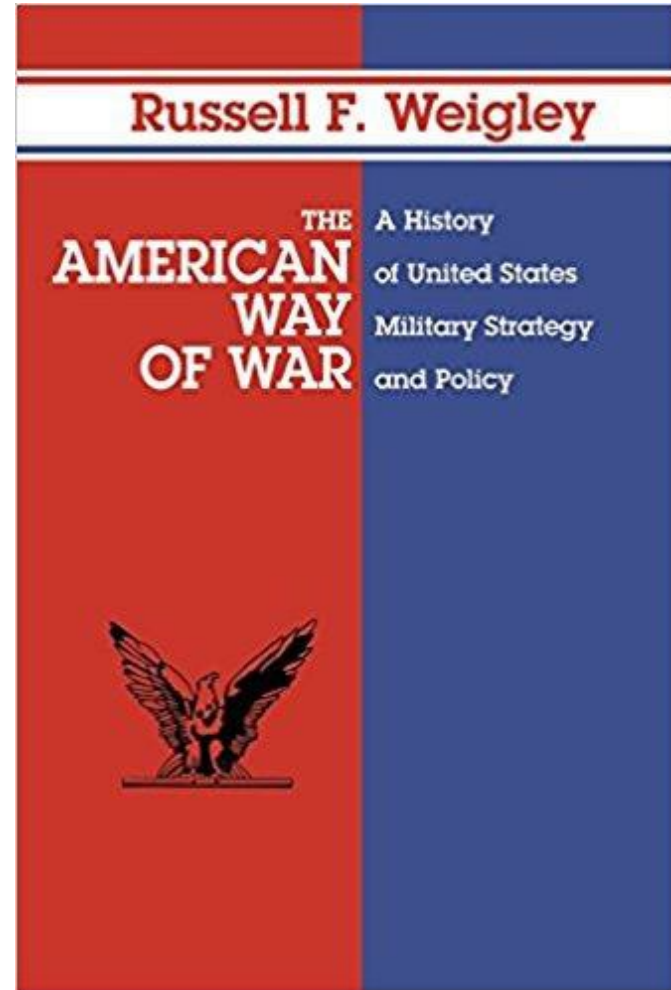
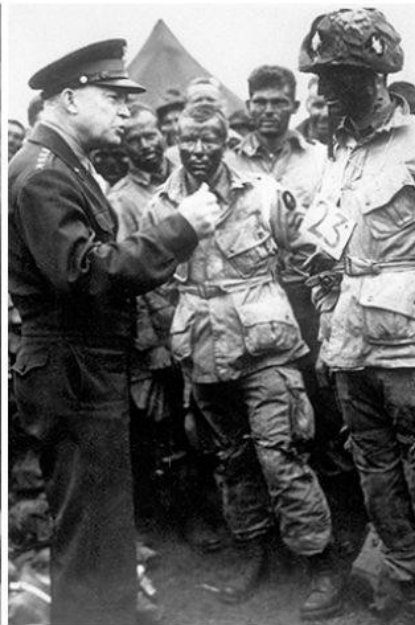


Rudolph Ludwig Karl Virchow  
1821- 1902

# Why the 'Best' Conventional Cancer Treatment Never Cure: "One size fits all"

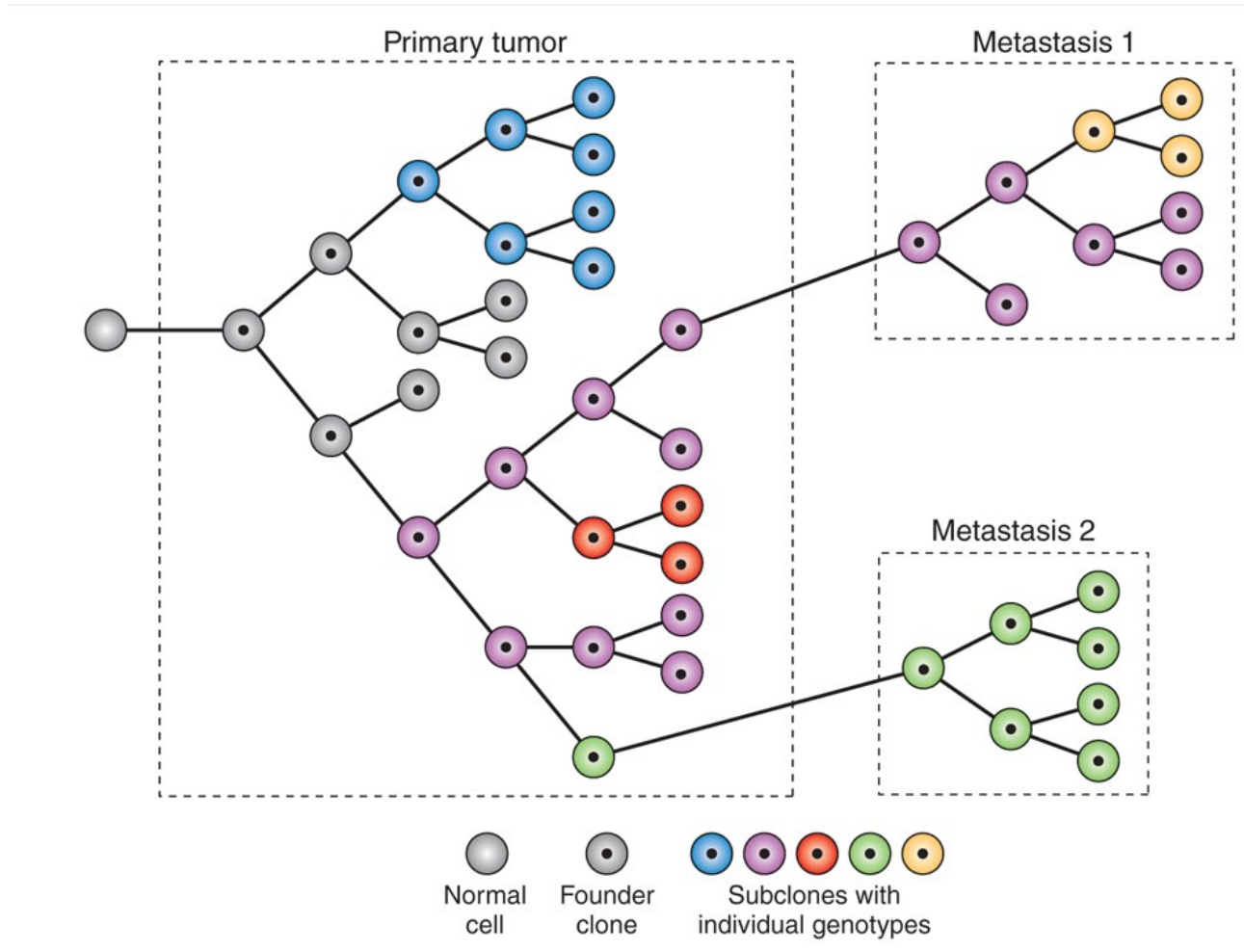


# The American Way of Winning

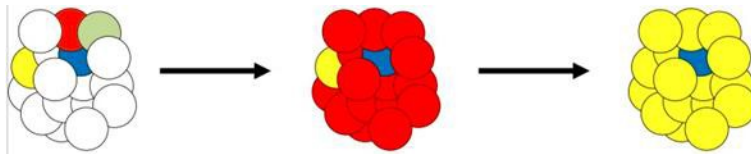
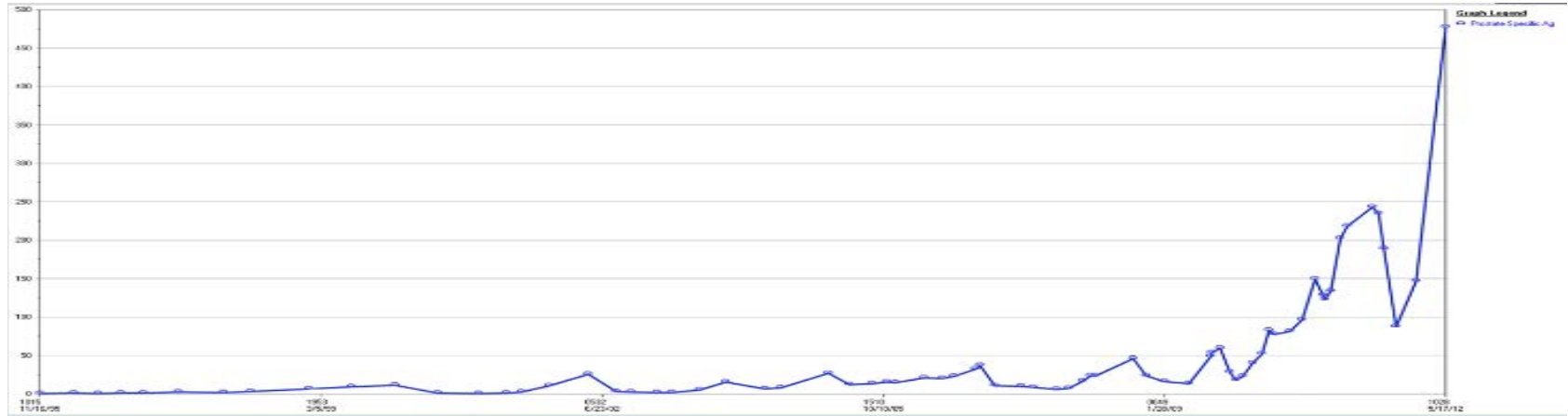




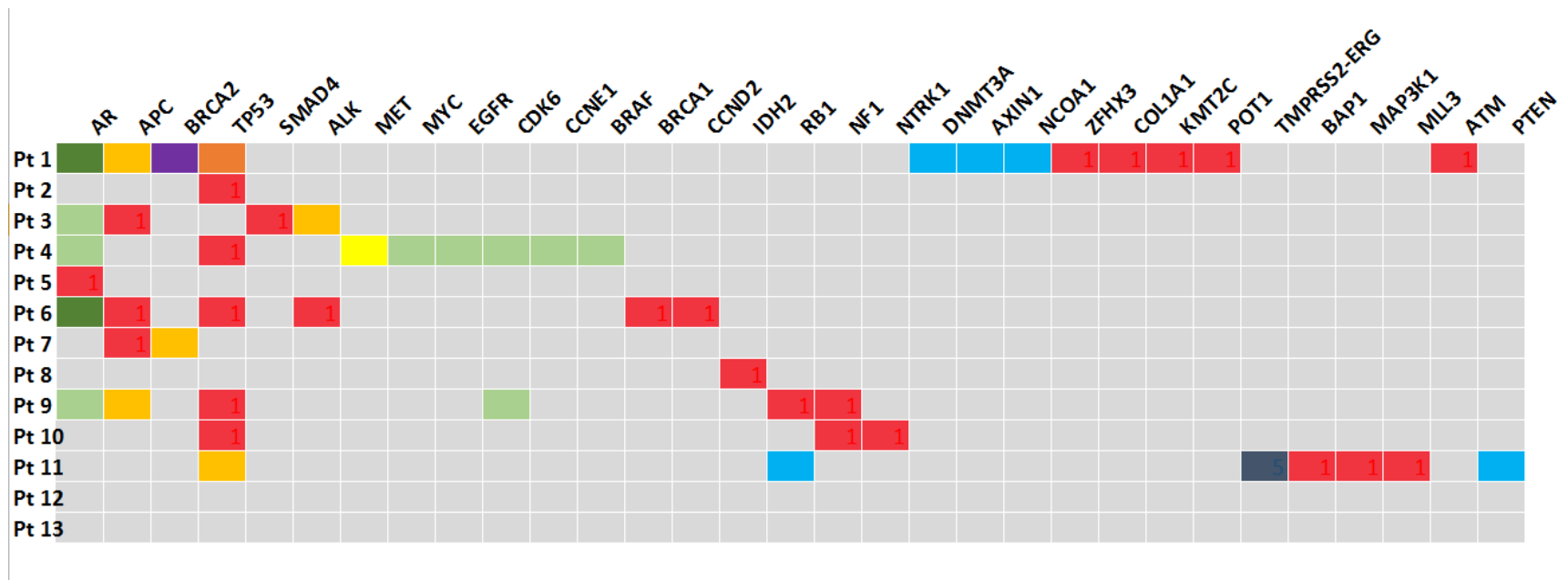
# Clonal evolution in primary tumors and metastases



# Rapid emergence of compensatory mechanisms of resistance: Playing “Whack a Mole”

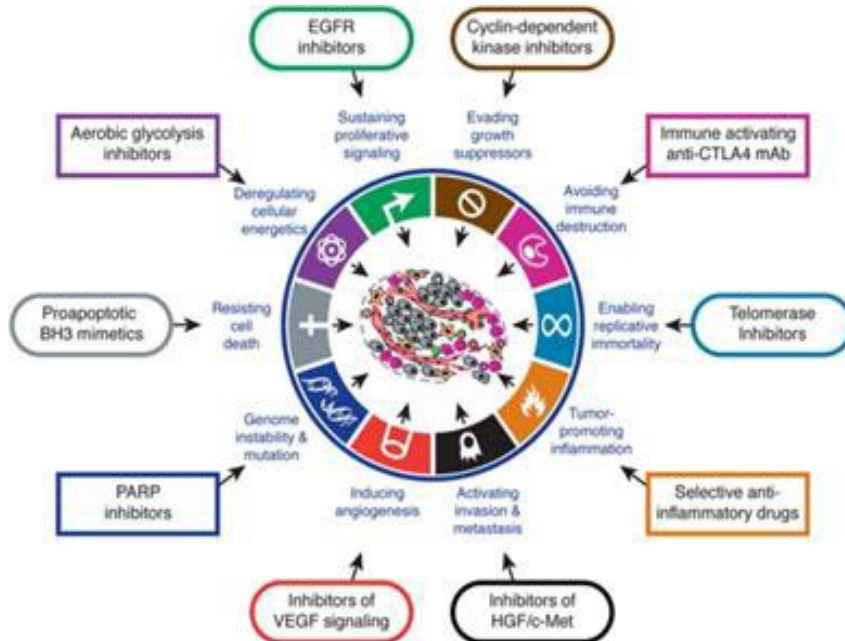


# Next-generation Sequencing of Advanced Prostate Cancer at UACC

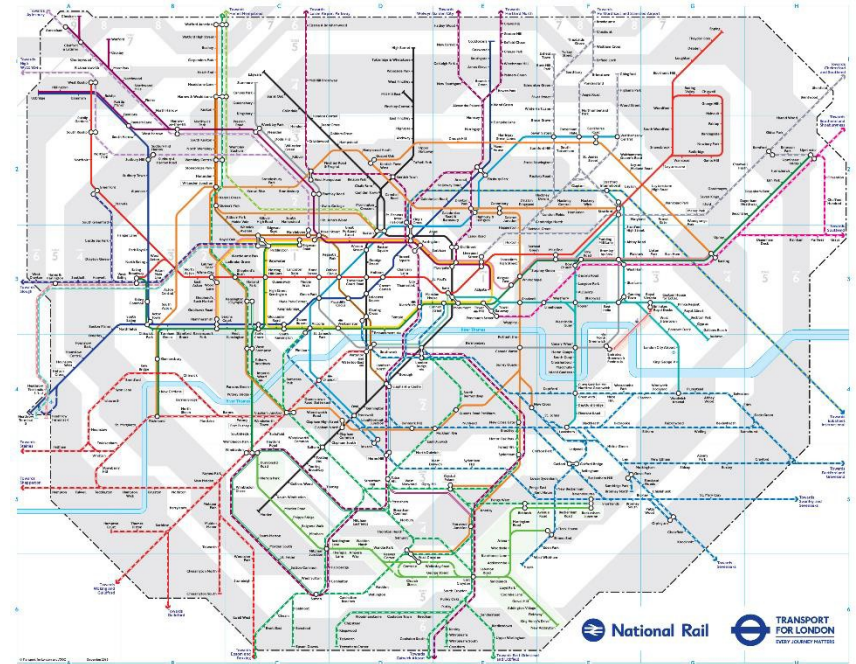
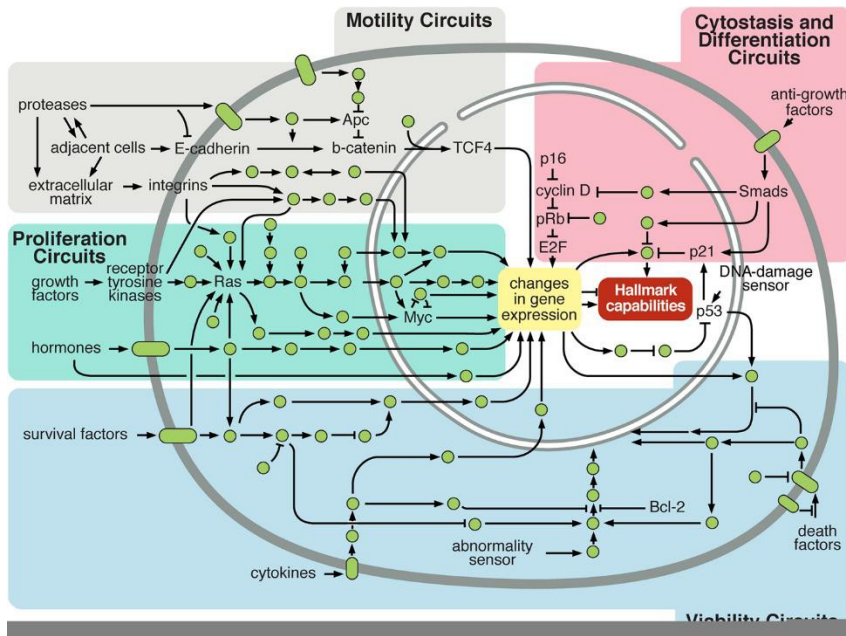


# Advances in Understanding Cancer Genomes through Next-generation Sequencing

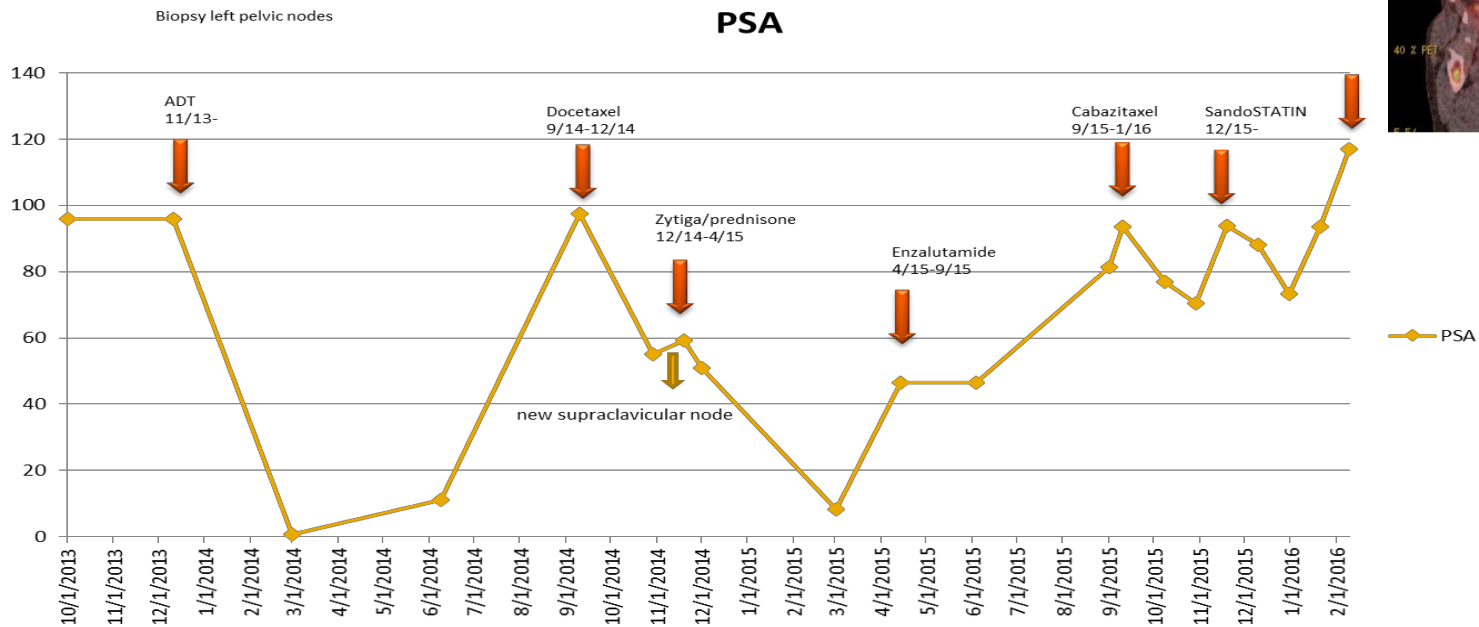
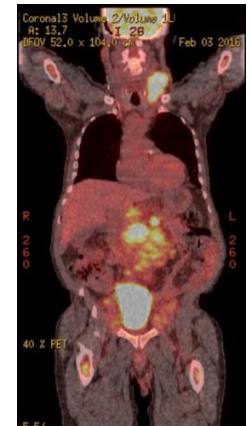
## Hallmarks of Cancer



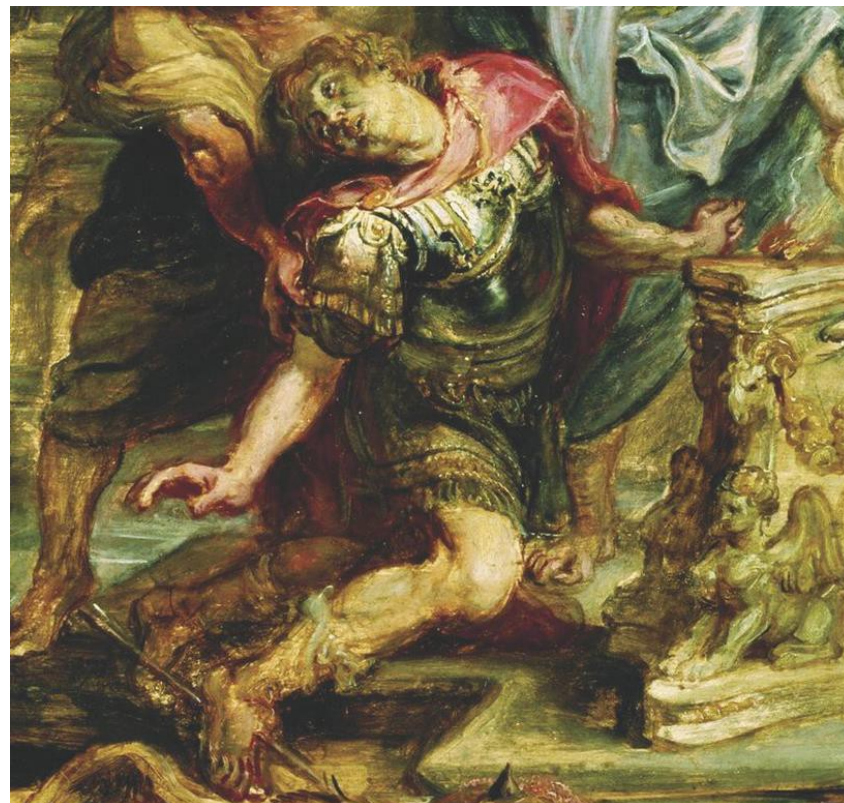
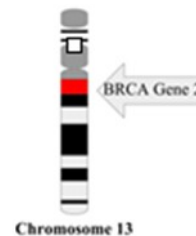
# Cancer: Disorganized “Traffic Signal Systems”



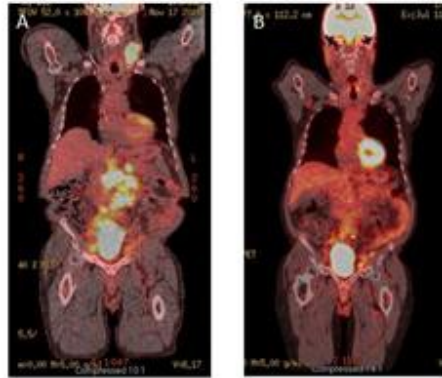
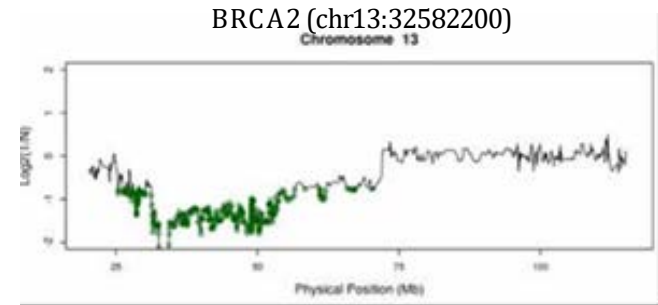
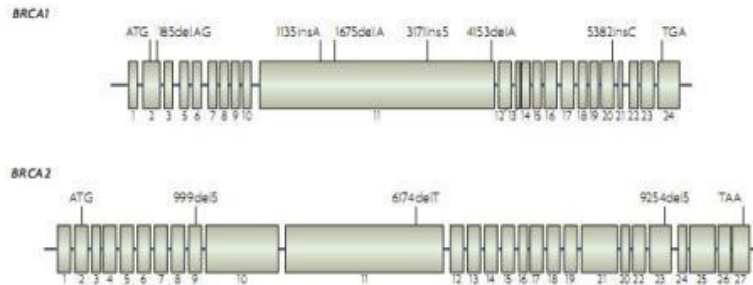
# 63-year-old male with stage IV prostate cancer (diagnosed in 2013) Came to UACC second opinion clinic on 9/15/2015



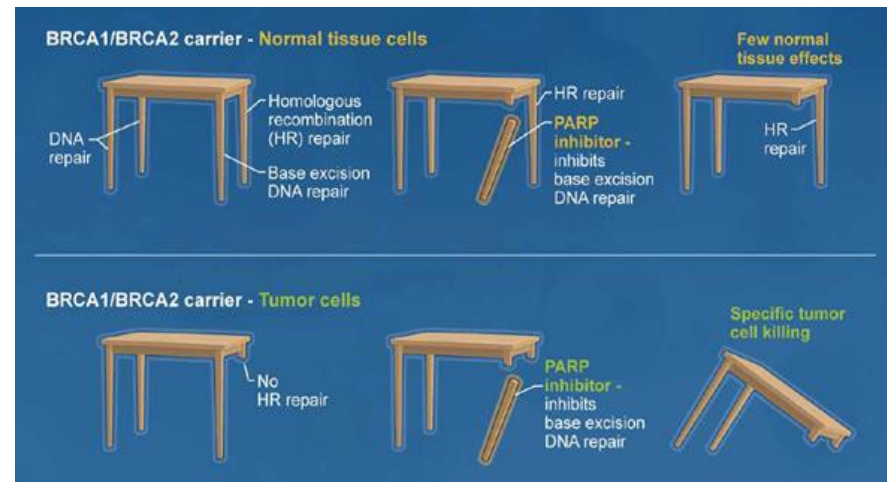
# Achilles' Heel for Prostate Cancer



# Harnessing Synthetic Lethal Interactions: Beating Cancer at Its Own Game



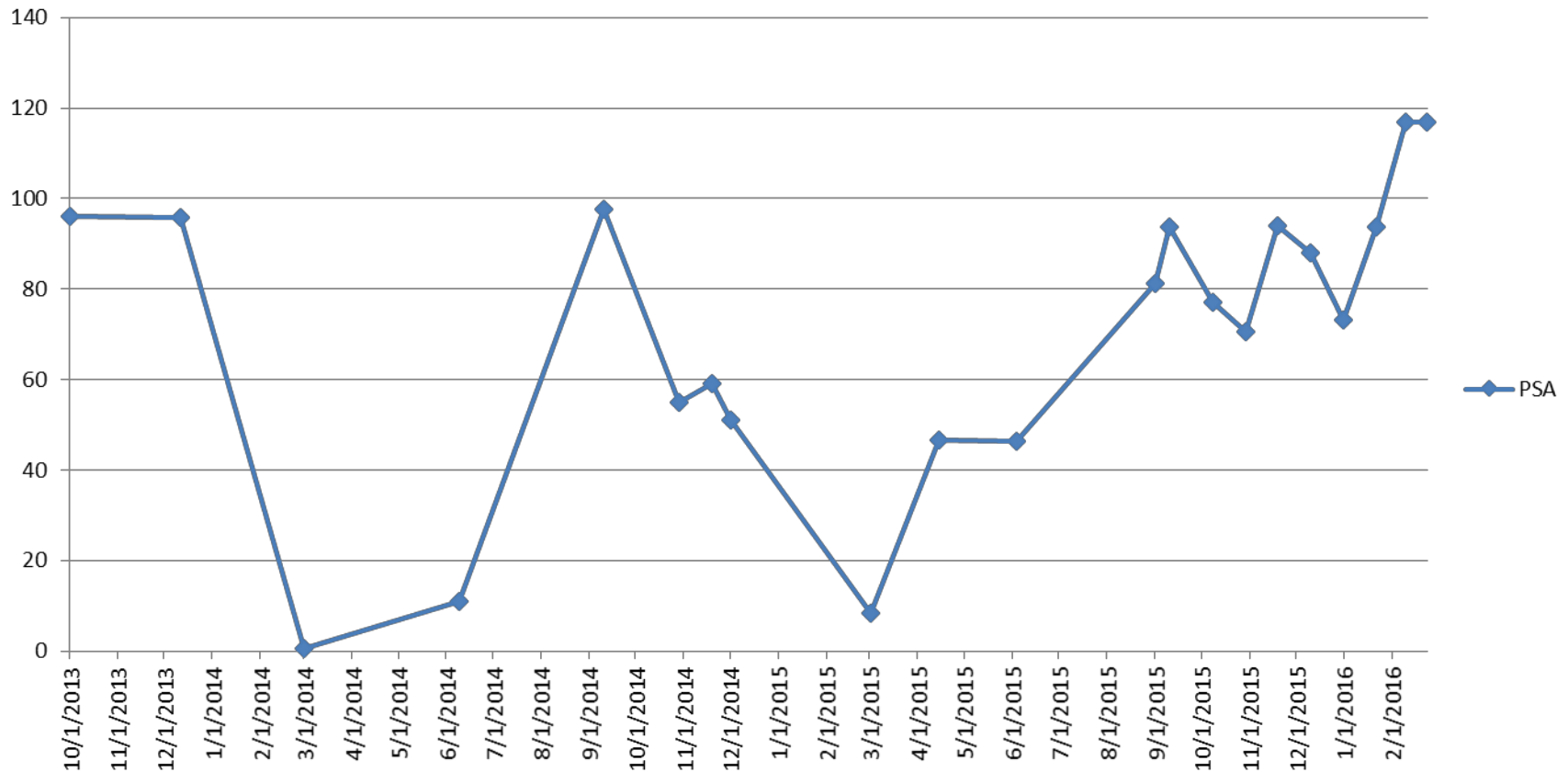
(A) FDG avid adenopathy in the multifocal regions including left cervical, left supraclavicular and retroclavicular, mediastinal, abdomen, and pelvis. (B) Significant decrease in size and positive response to treatment of left cervical, supraclavicular, pelvic, and retroperitoneal metastatic adenopathy after seven months addition of ocreotide treatment.





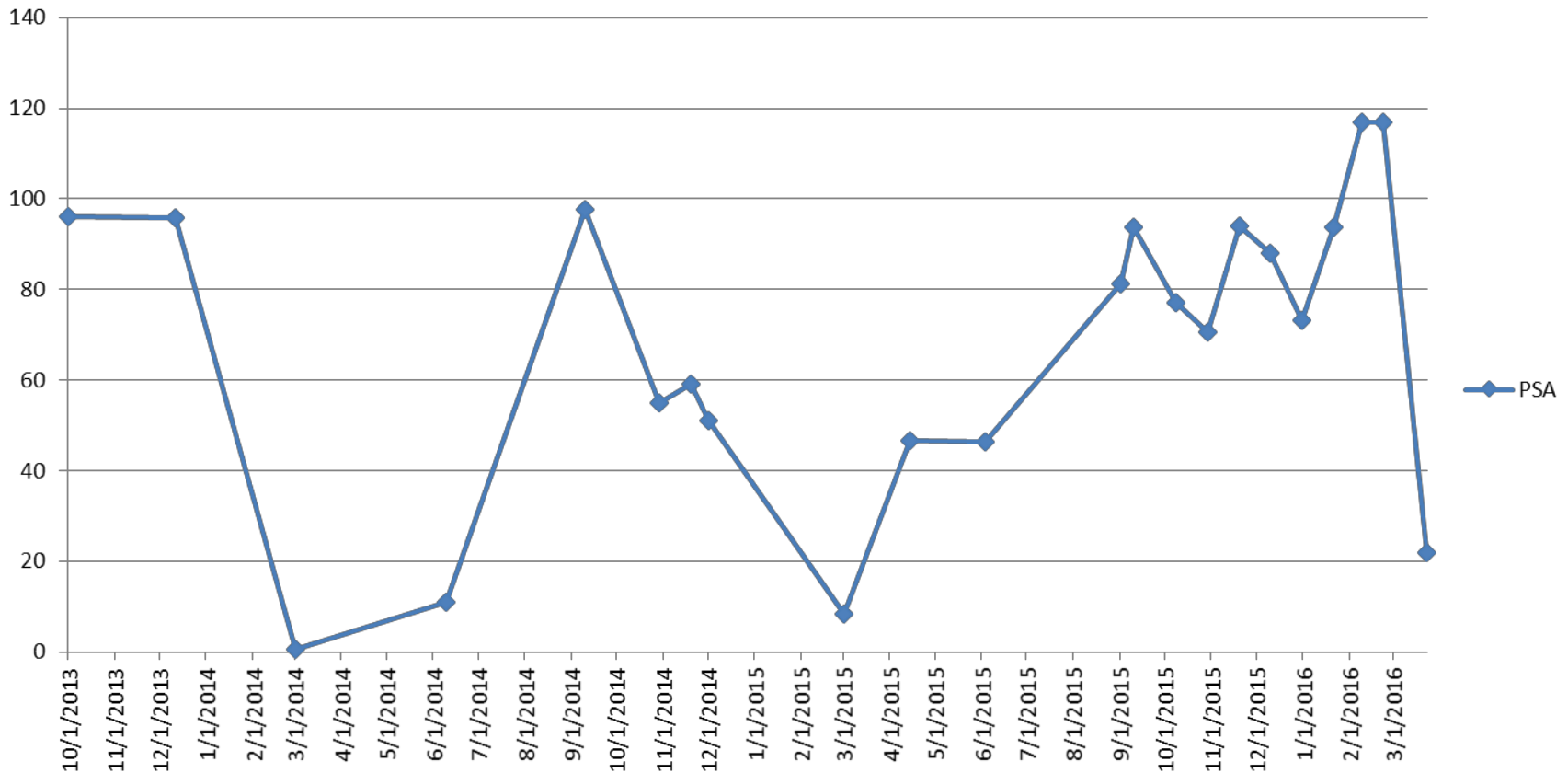
# Harnessing Synthetic Lethal Interactions: Beating Cancer at Its Own Game

PSA



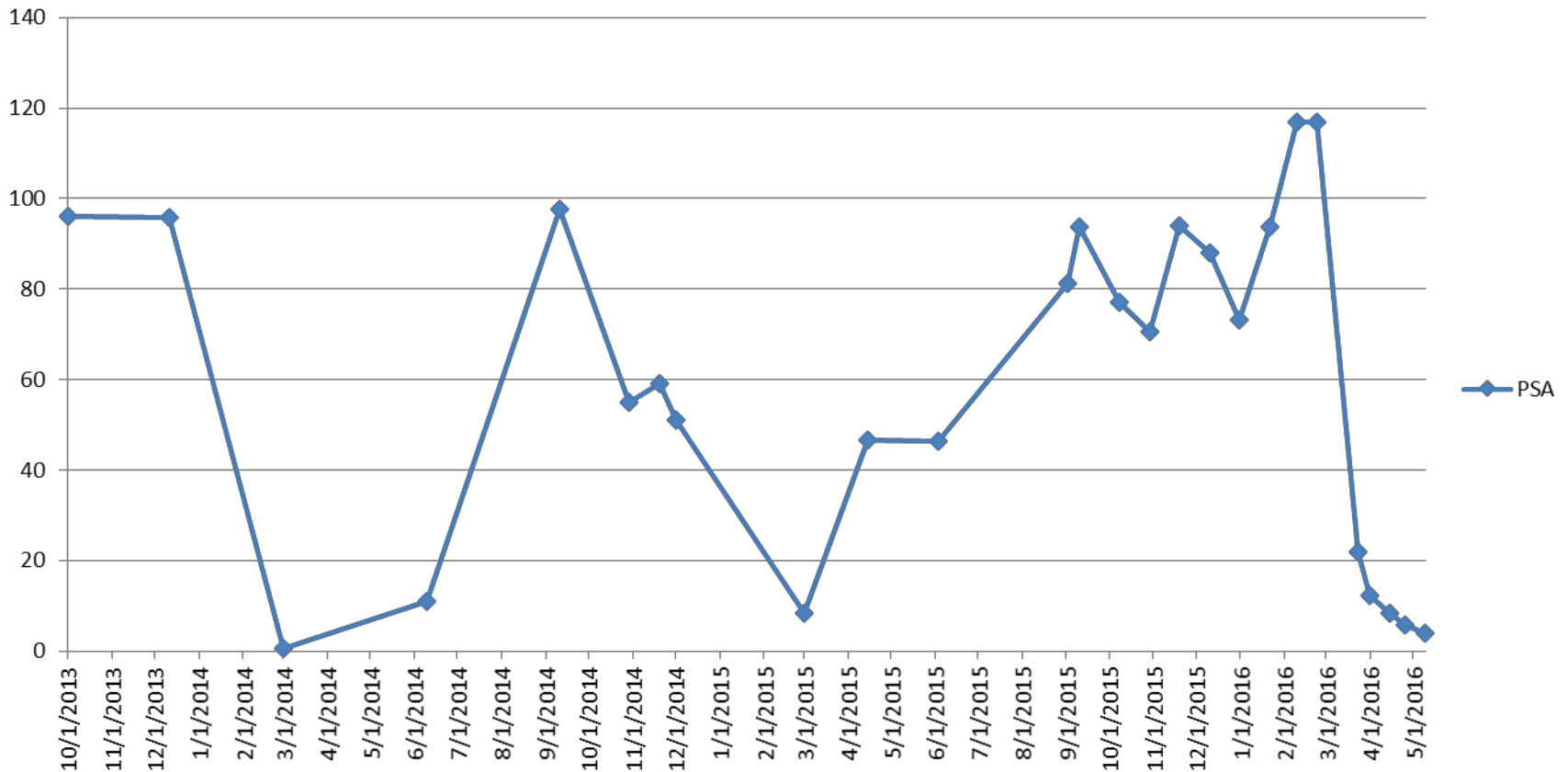
# Harnessing Synthetic Lethal Interactions: Beating Cancer at Its Own Game

PSA

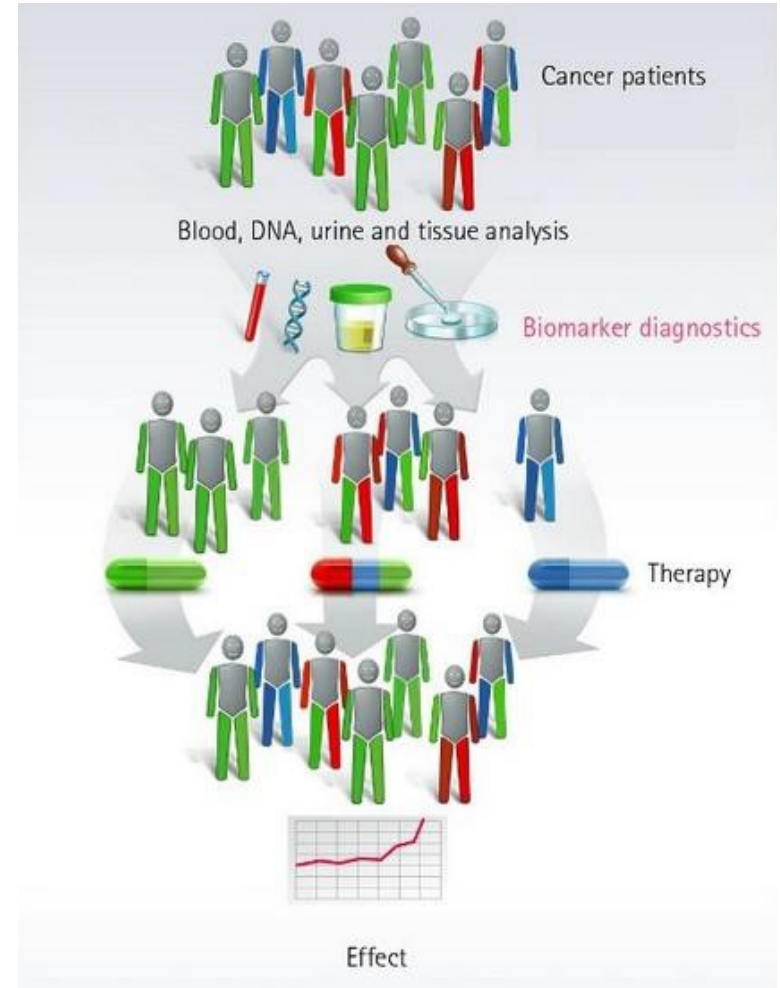
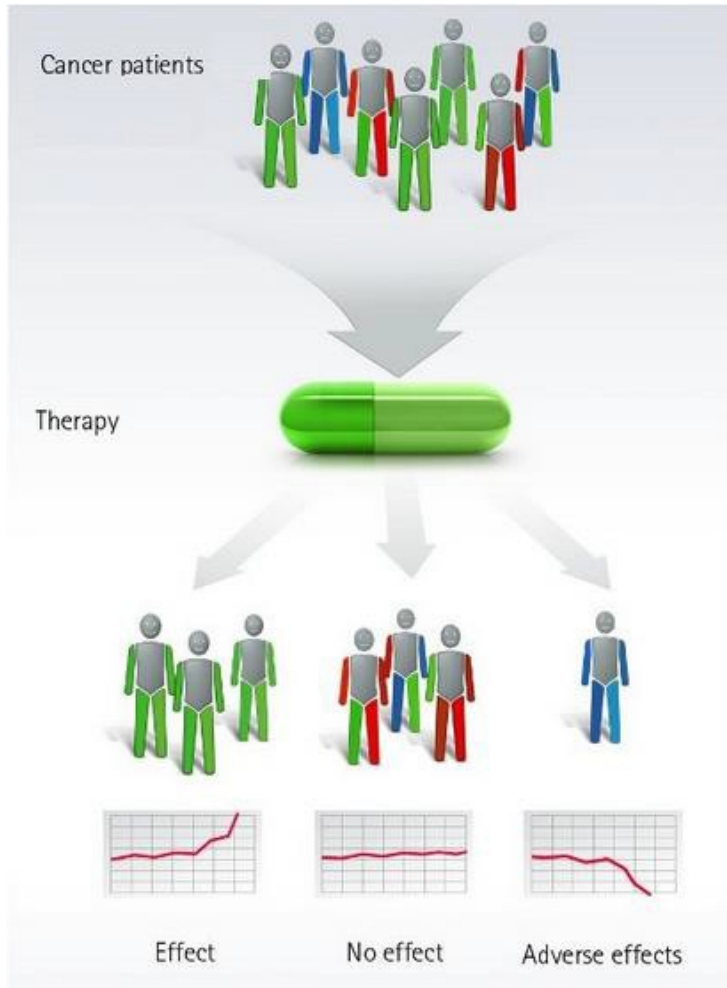


# Harnessing Synthetic Lethal Interactions: Beating Cancer at Its Own Game

PSA



# Harness the Power of Precision Medicine to Target Prostate Cancer



# Thank You

For more information about precision medicine or to request a speaker for your worksite or organization on any cancer-related topic **Call: 602.699.3366**





# CONNECT WITH US



@Got\_HAWP



Healthy Arizona Worksites Program



[healthyazworksites.org](http://healthyazworksites.org)



[info@healthyazworksites.org](mailto:info@healthyazworksites.org)



**SHERRY HASKINS, MPA**

*Worksite Initiatives Manager*  
*Sherry.Haskins@Maricopa.gov*  
*(602) 372-7034*



**TERESA SALAMA, MHA, CWP**

*Worksites Management Analyst*  
*Teresa.MalakSalama@Maricopa.gov*  
*(602) 359-4565*

**CONTACT US**



**THANK YOU  
FOR WATCHING!**

*HEALTHYAZWORKSITES.ORG*