



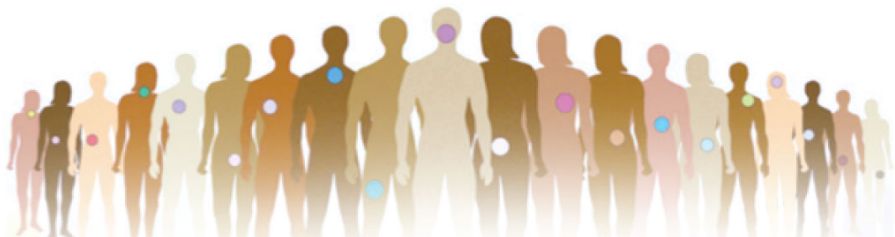
Prashanti Cancer Care Mission  
Reaching out with excellence



IndiaAlliance  
DBT wellcome

# 1<sup>ST</sup> TCGA CONFERENCE AND WORKSHOP IN INDIA

## Multi-Omics Studies in Cancer Learnings from The Cancer Genome Atlas (TCGA)



NATIONAL CANCER INSTITUTE  
THE CANCER GENOME ATLAS

### TCGA BY THE NUMBERS

TCGA produced over

**2.5**  
PETABYTES  
of data

To put this into perspective, 1 petabyte of data is equal to

**212,000**  
DVDs

TCGA data describes

**33** DIFFERENT TUMOR TYPES

...including

**10** RARE CANCERS

...based on paired tumor and normal tissue sets collected from

**11,000** PATIENTS

...using

**7** DIFFERENT DATA TYPES



Venue: **IISER Pune**

Conference:  
September 21-22, 2019

Hands-on Workshop:  
September 23-25, 2019

### Co-organized by:

- Centre for Translational Cancer Research (CTCR)- A joint initiative of Indian Institute of Science Education & Research (IISER), Pune and Prashanti Cancer Care Mission (PCCM), Pune
- Persistent Systems
- The Wellcome Trust/DBT India Alliance (India Alliance)
- The Cancer Genome Atlas (TCGA), NCI, NIH, USA

### Endorsed by



### Academic Partner

Indian Journal of Medical and Pediatric Oncology

For further details: <http://tcga.ctcr.in> | [ctcr.tcga@gmail.com](mailto:ctcr.tcga@gmail.com)

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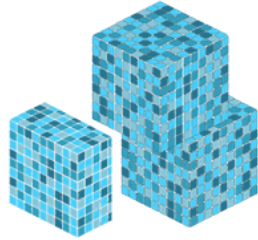
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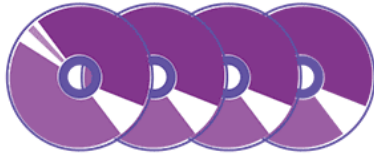
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## TCGA RESULTS & FINDINGS



MOLECULAR  
BASIS OF  
CANCER

Improved our understanding of the genomic underpinnings of cancer

For example, a TCGA study found the basal-like subtype of breast cancer to be similar to the serous subtype of ovarian cancer on a molecular level, suggesting that despite arising from different tissues in the body, these subtypes may share a common path of development and respond to similar therapeutic strategies.



TUMOR  
SUBTYPES

Revolutionized how cancer is classified

TCGA revolutionized how cancer is classified by identifying tumor subtypes with distinct sets of genomic alterations.\*



THERAPEUTIC  
TARGETS

Identified genomic characteristics of tumors that can be targeted with currently available therapies or used to help with drug development

TCGA's identification of targetable genomic alterations in lung squamous cell carcinoma led to NCI's Lung-MAP Trial, which will treat patients based on the specific genomic changes in their tumor.

## THE TEAM



# 20

COLLABORATING  
INSTITUTIONS

across the United States  
and Canada

## WHAT'S NEXT?

The Genomic Data Commons (GDC) houses TCGA and other NCI-generated data sets for scientists to access from anywhere. The GDC also has many expanded capabilities that will allow researchers to answer more clinically relevant questions with increased ease.



\*TCGA's analysis of stomach cancer revealed that it is not a single disease, but a disease composed of four subtypes, including a new subtype characterized by infection with Epstein-Barr virus.