

# Resources and Tools for Big Data in Translational Research

## Typical Examples:

- Oncomine
- TCGA
- CBIO
- TRANSMART
- GDOC-PLUS

**Table 2** Comparison of G-DOC *Plus* with other bioinformatics software platforms

	G-DOC <i>Plus</i>	TranSMART	CBio	Oncomine
Tools for Translational research	YES	YES	YES	YES
User friendly filtering of clinical data by user selected variables	YES	NO	NO	NO
Chromosomal instability index module that allows comparison of groups and plotting heatmaps at sample, chromosome, and cytoband level	YES	NO	NO	NO
Include tools such as Molecular Target Viewer to explore drug targets, Reactome for pathway analysis, and Cytoscape for network creation, integrated to allow end to end analysis	YES	YES	NO	NO
Tool to explore MRI medical images for precision medicine research	YES	NO	NO	NO
Variant search tool for precision medicine	YES	YES	NO	NO
Public studies available to the public for free	YES	Have a demo portal with limited access	YES	Limited free version
Tool to explore 1000 genomes dataset in the context of population genetics	YES	NO	NO	NO

# The Georgetown Data Base of Cancer (G-DOC)

## G-DOC – more than a database

Integrated Computational Environment Enabling Translational Research:  
Clinical Data + Molecular Data + Analysis Tools

## Major Goals:

Finding molecular correlates of clinical outcome

Enabling population based analysis as well as

Individual patient-level comparisons of molecular profiles

Identification of most informative molecular “players”

i.e. candidate biomarkers

Mapping these biomarkers to specific pathways /networks

Exploring “dragability” of these biomarkers