ABSTRACT
Biased and unbiased approaches to develop predictive biomarkers of response to drug treatment will be introduced and their utility demonstrated for cell cycle inhibitors. Opportunities to leverage the growing knowledge of tumors characterized by modern methods to measure DNA and RNA will be shown, including the use of appropriate preclinical models and selection of patients. Furthermore, techniques to identify mechanisms of resistance prior to clinical treatment will be discussed. Prospects for systematic data mining and current barriers to the application of precision medicine in cancer will be reviewed along with potential solutions.

Categories and Subject Descriptors
H.2.8 [Database Management]: Data Mining.

General Terms
Algorithms, Experimentation, Human Factors, Measurement.

Keywords
Computational Biology, bio-informatics, oncology, micro-arrays, gene sequencing.

Bio
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