

WM8 Bioinformatics/Biological Information Systems

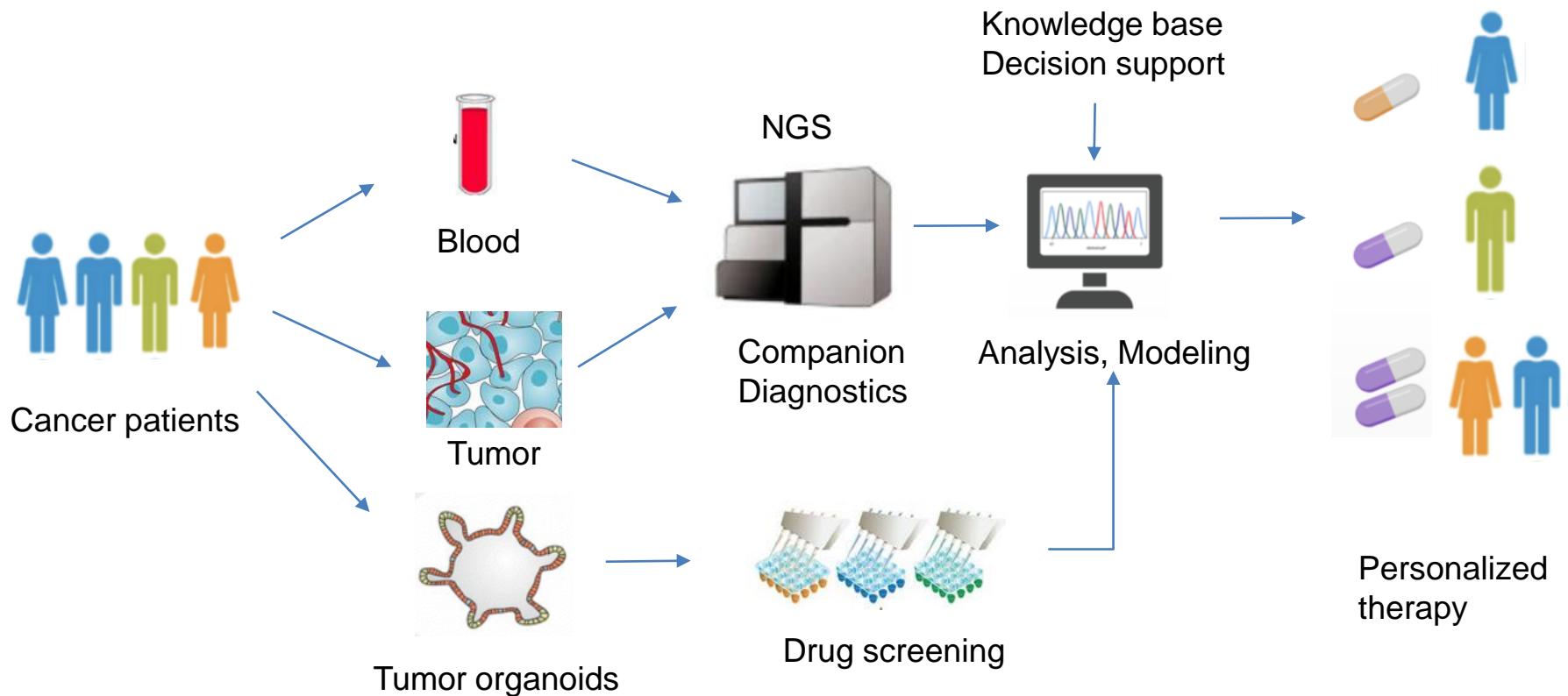
INFO: <http://icbi.at/wm8>

TIME: January 10-26, 2024

LECTURER: Zlatko Trajanoski (Coordinator)
Anne Krogsdam, Dietmar Rieder
Hubert Hackl (Institute of Bioinformatics)

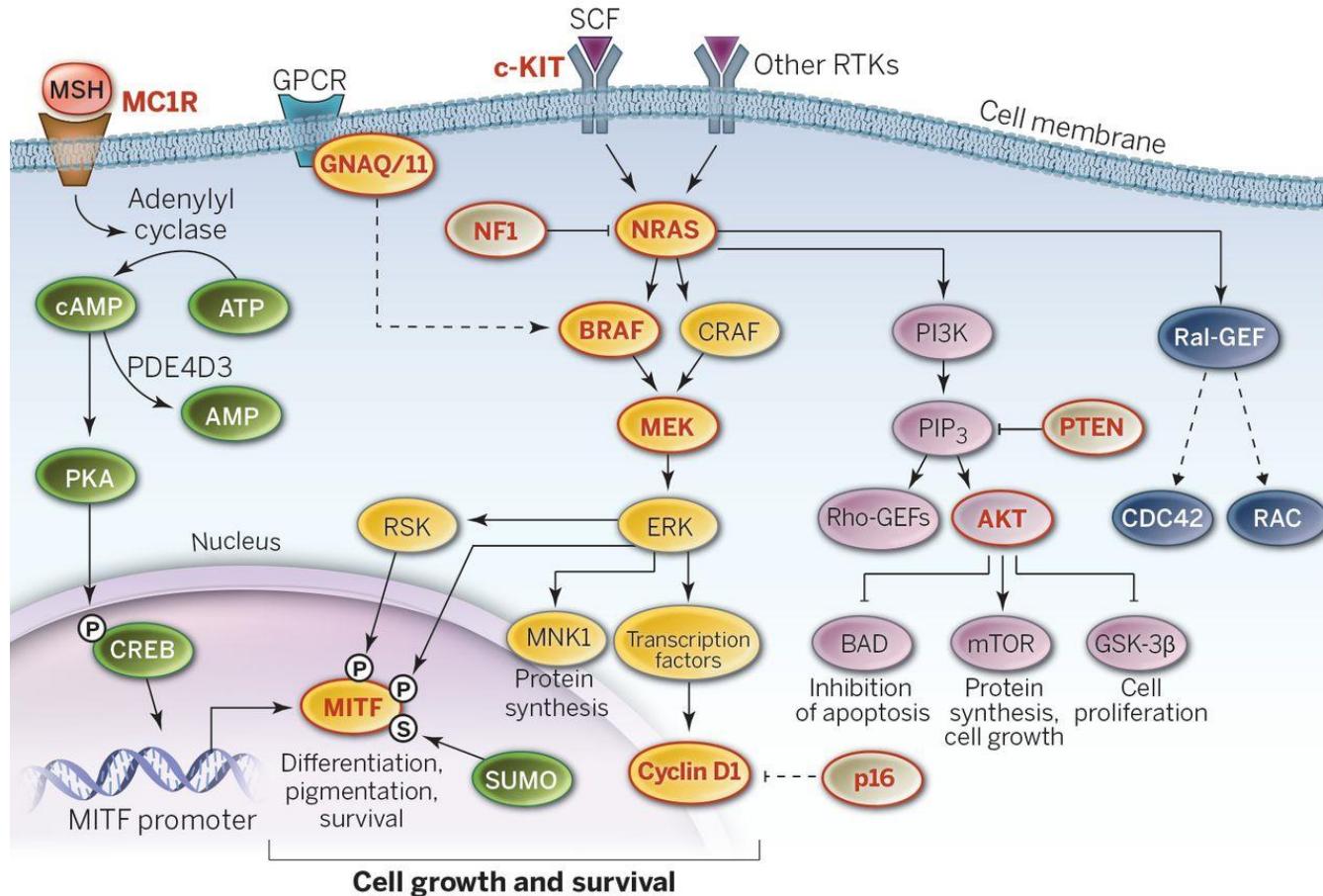
TOPICS: Bioinformatics for precision oncology
Exome/targeted sequencing
Analysis/interpretation of somatic variants

Precision oncology



Targeted cancer therapy

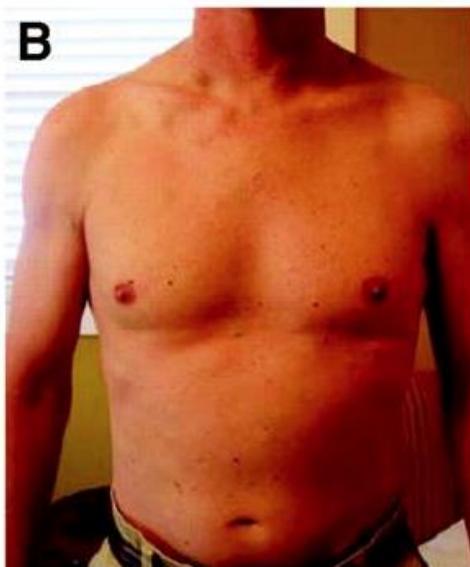
MAPK signaling promotes cell growth and survival and is constitutively active in most melanomas



Targeted cancer therapy: Targeting mutated BRAF in melanoma



Before therapy

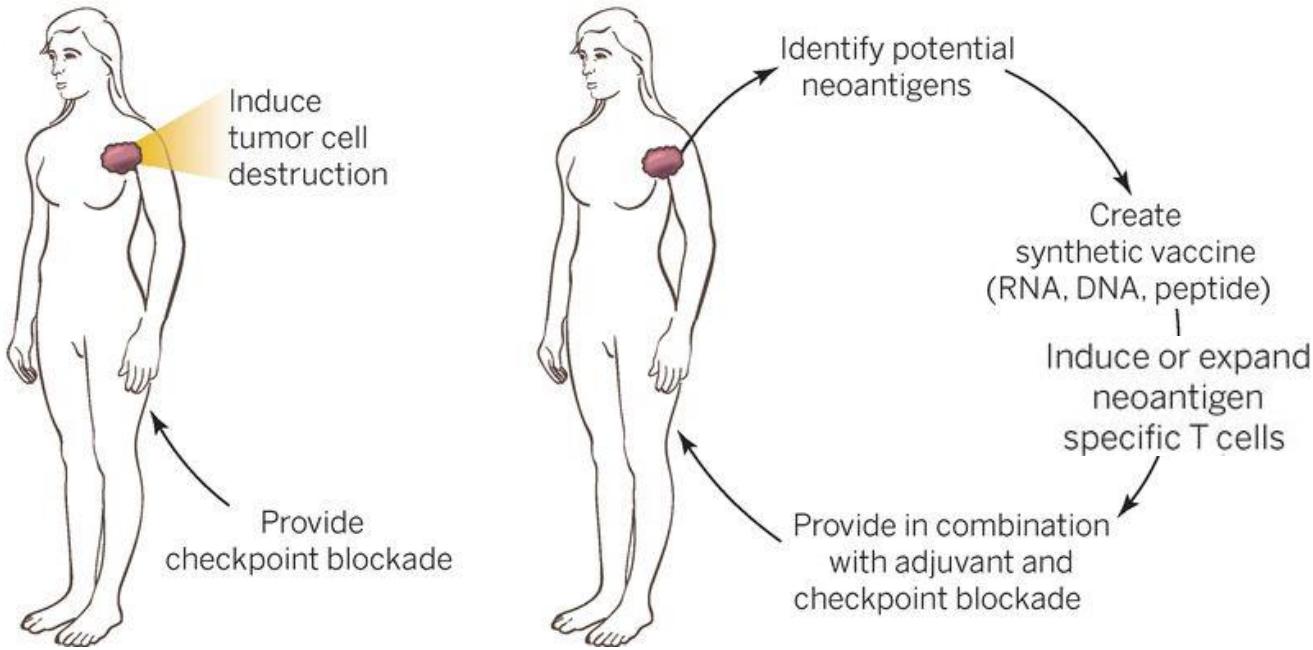


15 weeks after
onset of therapy



23 weeks after
onset of therapy

Immunotherapy

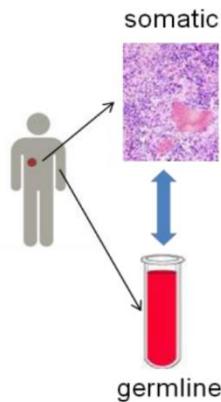


Predictive biomarker

Identification of neoantigens

Somatic variant detection in tumor samples

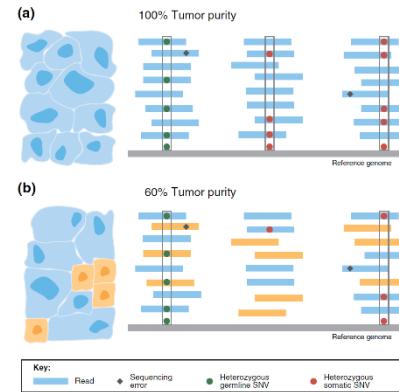
Patient samples



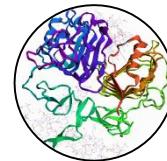
Exome/targeted sequencing



Bioinformatics analyses

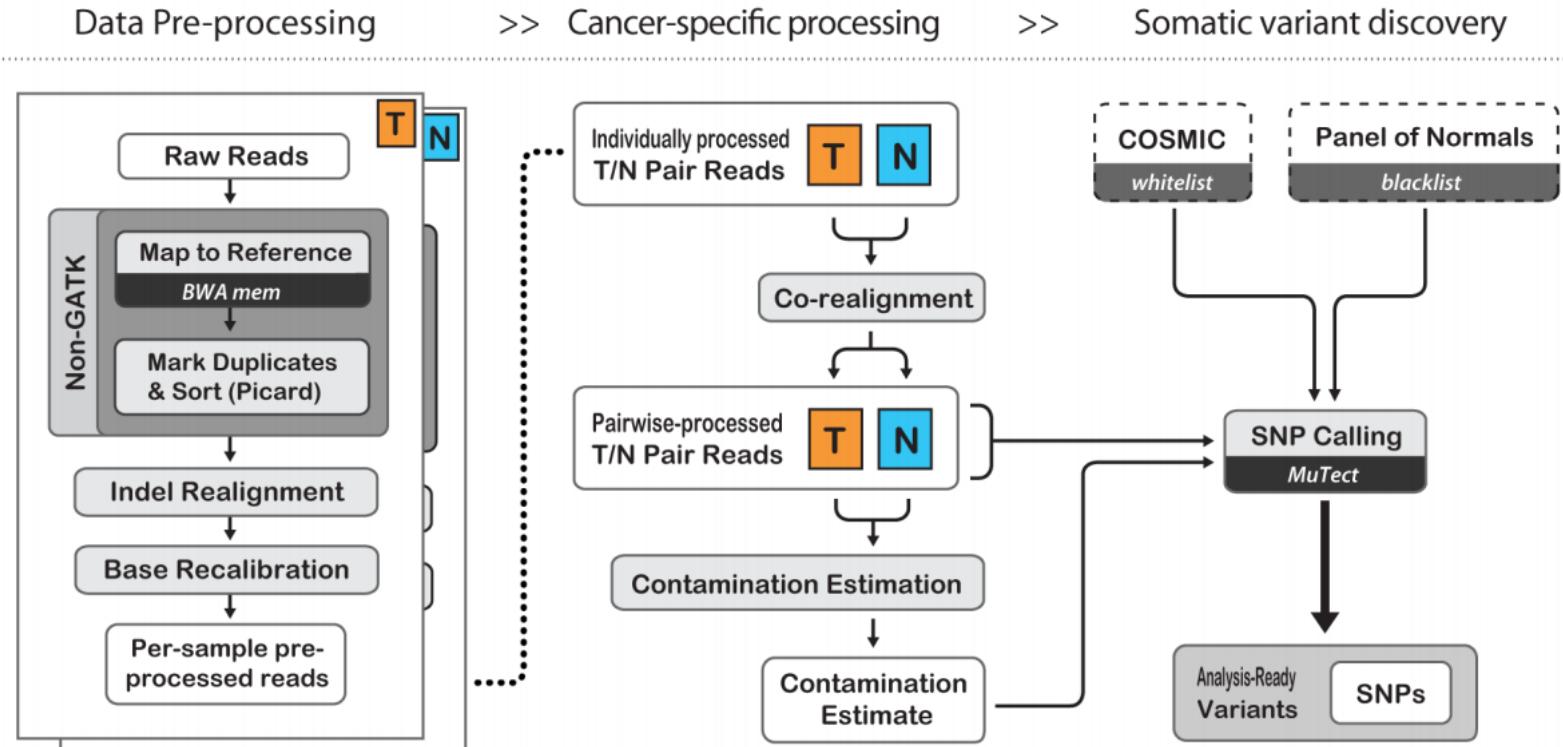


Variant impact

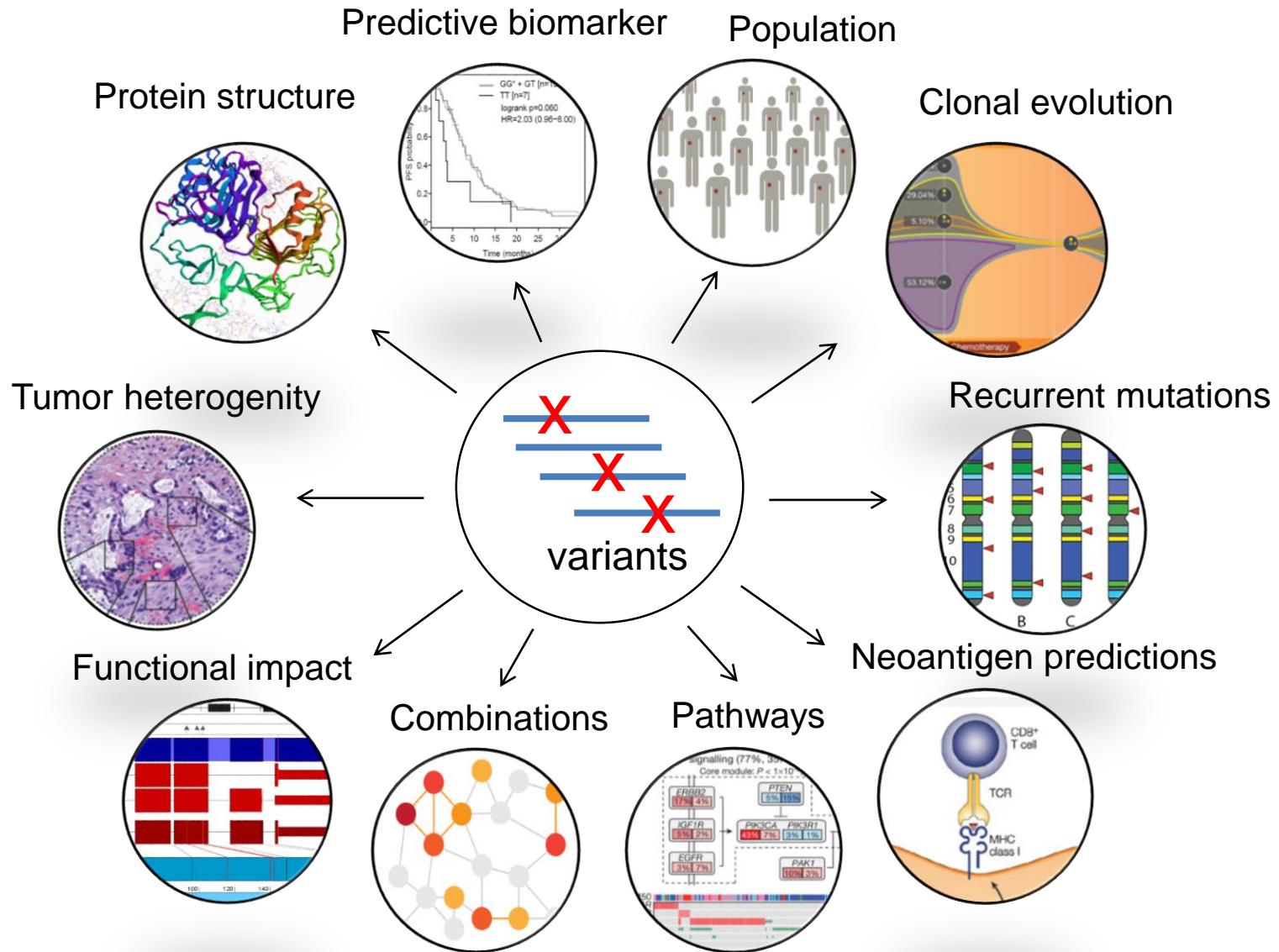


Diagnosis and therapy suggestions

Bioinformatics workflow (MuTect)



Analyses and interpretation of DNA variants



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TIME	ROOM	TOPIC	LECTURER
10.1 09-16	M01.392	VO Precision medicine VO Cancer genomics VO Bioinformatics for cancer immunology	Zlatko Trajanoski
11.1 09-16	M01.392	VO HT sequencing	
12.1 09-16	M01.392		
15.1 09-16	PRLAB	PR Targeted exome sequencing of tumor cells	Anne Krogsdam
16.1 09-16	PRLAB		
17.1 09-16	FP3/C3		
18.1 09-16	FP3/C3	VO/PR Primary data analyses, Mapping, Variant calling	Dietmar Rieder
22.1 09-12	FP3/C3		
22.1 13-16	FP3/C3	VO/PR Secondary data analyses, Databases,	
23.1 09-16	FP3/C3	Interpretation	Hubert Hackl
24.1 09-16	FP3/C3		
25.1 09-16	M01.470	JC Discussion of publications	ZT,AK,DR,HH
26.1 09-16	M01.470	SE Seminar, Presentation*	ZT,AK,DR,HH