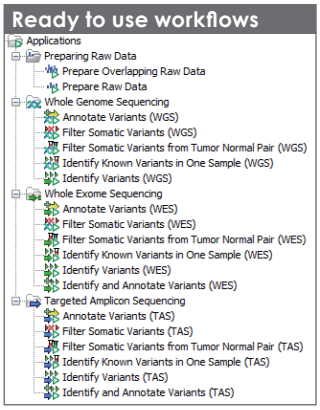
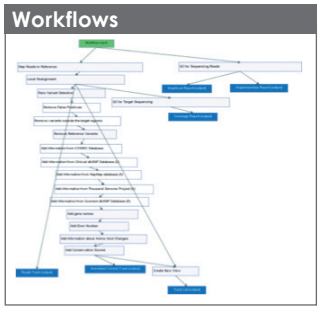
COMING SOON

CLC **Cancer Research** Workbench

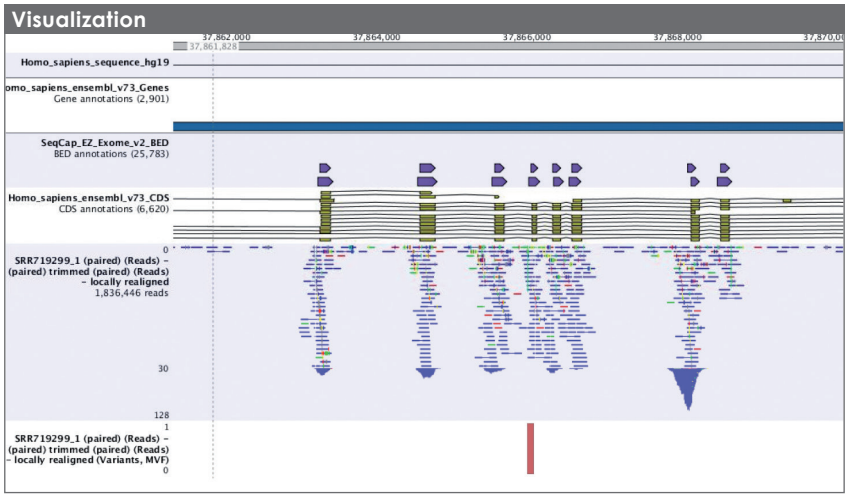






CLC Cancer Research Workbench is the world's first comprehensive, user-friendly, and customizable cancer-focused informatics solution. It offers flexible cancer-specific ready-to-use analysis workflows that can be modified, or you can add new personalized workflows from scratch. Advanced resequencing tools in combination with an intuitive graphical user-interface allows rapid analysis and accurate interpretation of advanced next generation sequencing data.

CLC Cancer Research Workbench provides scientists and clinicians with the tools to discover prognostic markers, identify subclonal somatic mutations, detect inherited traits, find biomarkers for drug response, and determine new oncogenes - and all results can be filtered, visualized, and compared with relevant databases.



USER FRIENDLY AND INTUITIVE

- Inspect identified variants in the context of mapped sequencing reads, human genes, and variants in clinical relevant databases
- Easy to build new analysis workflows
- User-friendly toolbox

END-TO-END WORKFLOWS FOR ANALYSIS OF CANCER DATA

- Support for targeted amplicon, exome, and whole genome sequencing data for all sequencing platforms
- Identify new variants
- Annotate your variants with information from databases, amino acid changes, and conservation scores
- Identify somatic variants from a tumor/normal matched pair
- Identify somatic variants in case no normal sample is present
- Identify known variants in one sample

HUMAN AND CANCER SPECIFIC REFERENCE DATA

Human genome, dbSNP, dbSNP common from UCSC, COSMIC, ClinVar, HapMap, 1000 genomes data, and Ensembl genes

CUSTOMIZE WORKFLOWS AND CREATE NEW

- Drag and drop a workflow in the workflow editor, edit it and install it again
- Share workflows with your collaborators and colleagues

SPECIAL TOOLS DESIGNED FOR CANCER DATA ANALYSIS

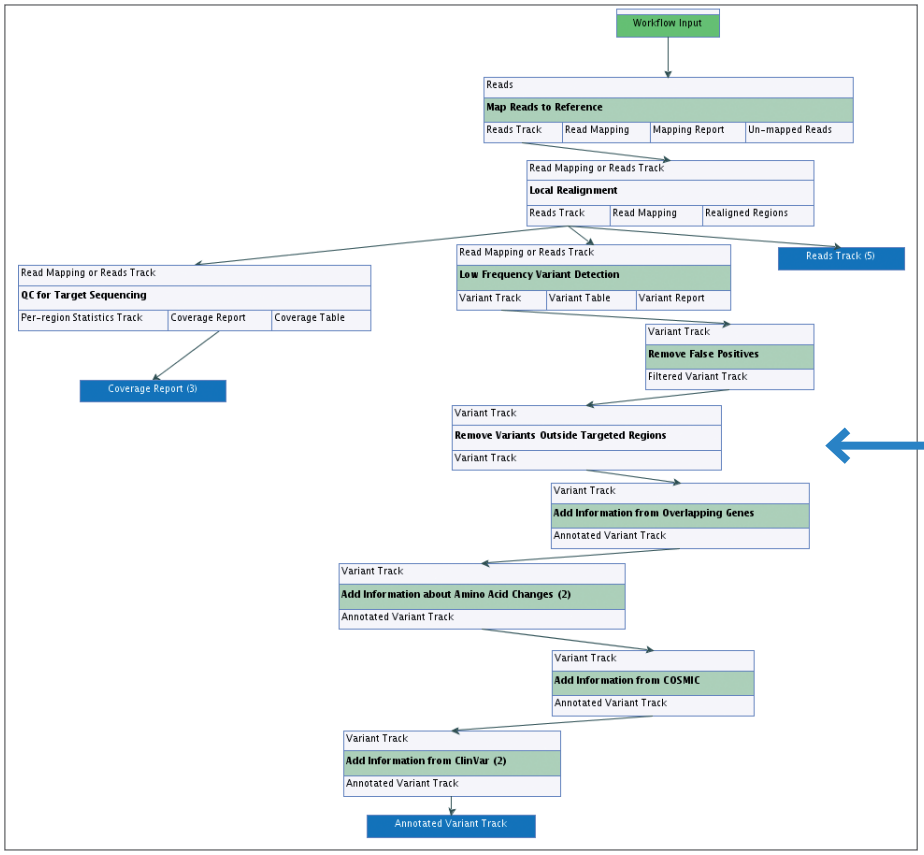
- Remove germline variants
- Identify rare subclonal mutations
- Annotate identified variants with information from known clinically relevant variants from COSMIC and ClinVar
- Test the presence of specific clinically relevant variants in one or several samples
- Compare samples and identify new biomarkers
- Identify mutated genes for further analysis

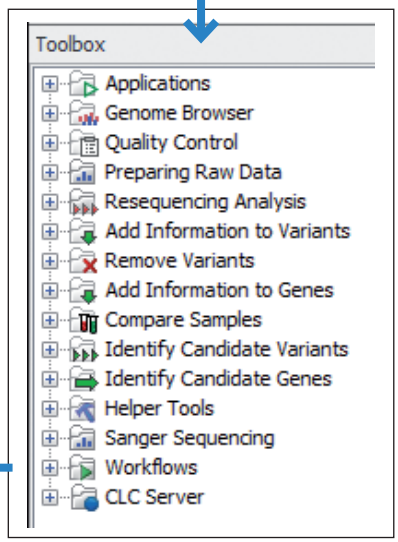
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Chr...	Region	Type	Ref...	Allele	Zygosity	Count	Coverage	Freq...	Average quality	Amino acid change in longest transcript	Non-syn...	conservation...	Site Cosmic_...	Somatic stat...	CLNDBN ClinVar_20130930	Gene C...	COSMIC	PUBMED	dbSNP
15	23021238	SNV	C	T	Hetero...	503	1089	46.19	37.72		No	1.00	prostate	Confirmed ...		NIPA2	1179596	23265383	
7	9165217...	Insertion	-	AAC	Hetero...	728	1271	57.28	38.40	ENSP00000351922:p.Lys1347delinsLysGln	Yes		ovary, ovary	Confirmed ...		AKAP9	112144,	21720365	
9	21968199	SNV	C	G	Homoz...	148	148	100...	37.97		-	0.00	oesophagus	Confirmed ...		CDKN2A	14251	9713590	
X	66943552	SNV	A	G	Hetero...	517	847	61.04	38.10	ENSP00000363822:p.Thr878Ala	Yes	1.00	liver;prostate, ...	Confirmed ...	Malignant_tumor_of_prostate	AR	336693,	22722839	137852578
7	91713017	Deletion	A	-	Hetero...	525	702	74.79	36.68		-	0.00	liver	Variant of u...		AKAP9	1623297		
16	72993831	SNV	A	C	Homoz...	460	477	96.44	35.53	ENSP00000268489:p.Ser72Ala	Yes	0.98	large_intestine...	Variant of u...		ZFHX3	1563502		

RESULT: An end-to-end analysis workflow on targeted amplicon sequencing data.





TOOLBOX: Actions in the toolbox allow additional filtering, annotation, and sample comparision to identify new cancer biomarkers.

Plugins are available for CLC Cancer Research Workbench, including end-to-end workflows for QIAGEN gene panels and Ingenuity's Variant Analysis.

WORKFLOWS: Building your own workflows and customization of workflows.

CLC Cancer Research Workbench is part of the CLC bio Enterprise Platform with support for client-server setup, and command-line tools. Furthermore, like all other workbenches from CLC bio, CLC Cancer Research Workbench runs on Mac OS X, Windows, and Linux platforms.

For more information, please write to our sales team by email on **sales@clcbio.com** or contact your local sales representative.

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