COSMIC Actionability v7 - release notes

COSMIC Actionability is a vital tool for anyone working in precision oncology. Our expertly curated database details the availability and development of drugs targeting somatic mutations in cancer. We integrate data from case studies, clinical trials, and regulatory bodies to represent a full picture of the current precision oncology pipeline.

Actionability has three core units: mutation, disease and drug. By capturing relations between these units, we identify existing and upcoming drugs that target specific genetic variants in different cancer types.

COSMIC's trusted expert-curation process is embedded within Actionability, but it exists as a standalone product. The release of Actionability v7 has been timed to coincide with Core COSMIC v97 release. Typically the releases are separate as we aim to provide 4 per year; this reflects the rapid pace of global precision oncology. Actionability is a cutting edge ' living-tool' and the data is intended to be as up to date as possible.

Actionability downloads are free for Academic Non-Commercial Use* via COSMIC or available to purchase and download from QIAGEN. A taster file of EGFR data can be accessed here

If you'd like to know more about the curation process behind Actionability, read our interview with Principal Curator, Steve Jupe

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Updates

COSMIC Actionability v7 includes **11** additional fully-curated genes:
CD274 (PD-L1), HRAS, MAP2K1 (MEK1), AR, GNA11, GNAQ, SMAD4, TSC1, DDR2, ETV6, FOXL2

This means we have a total of 72 fully curated genes:

ABL1, AKT1, AKT2, AKT3, ALK, ASXL1, ATM, BCR ,BRAF, BRCA1, BRCA2, BTK, CDK12, CDK4, CDK6, CEBPA, CTNNB1, DNMT3A, EGFR, ERBB2, ERBB3, EZH2, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, IDH1, IDH2, JAK1, JAK2, JAK3, KIT, KMT2A ,KRAS, MDM2, MDM4, MET, MLH, MPL, MSH2, MSH6, NF1, NF2 ,NPM1, NRAS, PDGFRA, PDGFRB, PIK3CA, PMS2, PTCH1, PTEN, RET, ROS1, RUNX1, SF3B1, SMO, STK11, TET2, TP53, WT1, CD274 (PD-L1), HRAS, MAP2K1 (MEK1), AR, GNA11, GNAQ, SMAD4, TSC1, DDR2, ETV6, FOXL2

To view the full list of curated genes visit the [About](#) page on the Actionability website.

All previously-recorded clinical trials have been checked for new or updated results.

Expressed/not category added to Patient Pre-screening

From v7 onwards the download file contains a new category: 'Expressed/not'

This is used for trials that compare patients that express a protein with those that don't or compare patients with high expression with those with low expression. In practice, there is usually a threshold expression level and the comparison is between patients above/below it. If our curator is able to find out the measure and threshold level that was used, it appears as part of the trial name.

This new value is represented by the term **Patient Pre-Screening**, in the column **mutation_selected_dict**

- positive/above threshold expression - patient number and results value recorded in **treatment values** column

- negative expression/below threshold values - value will appear in the fields used for control values, as is the case for trials that compare a treatment in patients with/without a mutation

There are several trials using this new category in v7.

Addition of Australian/New Zealand Clinical Trials Registry

Actionability v7 includes the addition of a new datasource: the Australian New Zealand Clinical Trials Registry (ANZCTR). This can be seen in the **Source_Type** column as a value of 9.

Actionability statistics - v7

Genes fully curated	**72**
Genes included	**311**
Drugs	**1520**
Treatment combinations	**3943**
Trials with results	**3756**
Total trials	**9021**
Evidence from trial databases	**6609**
Evidence from PubMed & others	**2685**
Point mutations	**154**
Total variants	**734**

Accessing Actionability - T&Cs

Actionability v7 and subsequent releases will be freely available for non-commercial use. Please see our terms for clarification on commercial/non-commercial use. Make sure you read and understand whether you count as commercial via our licensing page

If you are using COSMIC Actionability for non-commercial purposes, you can register for an account and download the data directly from COSMIC

To access COSMIC Actionability for commercial use, please contact our Sales Partner QIAGEN