

Resource Summary Report

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pVACtools

RRID:SCR_025435

Type: Tool

Proper Citation

pVACtools (RRID:SCR_025435)

Resource Information

URL: <https://pvactools.readthedocs.io/en/latest/>

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Description: Software toolkit to identify and visualize cancer neoantigens. Cancer immunotherapy tools suite consisting of following tools: pVACseq as cancer immunotherapy pipeline for identifying and prioritizing neoantigens from VCF file; pVACbind as cancer immunotherapy pipeline for identifying and prioritizing neoantigens from FASTA file; pVACfuse as tool for detecting neoantigens resulting from gene fusions; pVACvector as tool designed to aid specifically in construction of DNA-based cancer vaccines; pVACview as application based on R Shiny that assists users in reviewing, exploring and prioritizing neoantigens from results of pVACtools processes for personalized cancer vaccine design.

Resource Type: software toolkit, software resource

Defining Citation: [PMID:31907209](#)

Keywords: Cancer immunotherapy tools, identify and visualize cancer neoantigens,

Funding: NCI U01CA209936;
NCI U01CA231844;
NCI U24CA237719;
NHGRI R00HG007940;
V Foundation for Cancer Research

Availability: Free, Freely available

Resource Name: pVACtools

Resource ID: SCR_025435

Record Creation Time: 20240628T053249+0000

Ratings and Alerts

No rating or validation information has been found for pVACtools.

No alerts have been found for pVACtools.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 30 mentions in open access literature.

Listed below are recent publications. The full list is available at [dkNET](#) .

Culliford R, et al. (2026) Contrasting Features of Papillary and Chromophobe Renal Cell Carcinoma Revealed by Whole-Genome Sequencing. *Molecular cancer research : MCR*, 24(5), 327.

Mao Y, et al. (2026) Prospective tumour mutation burden and neoantigen profiling predicts immunotherapy response in metastatic melanoma. *NPJ precision oncology*, 10(1), 55.

Swift SZ, et al. (2026) Integration of Short- and Long-Read RNA Sequencing Enables the Discovery of Circular RNAs. *Cancer research*, 86(5), 1300.

Ferreira I, et al. (2025) The molecular cartography of malignant and benign sebaceous tumours. *Nature communications*, 17(1), 14.

Laplante P, et al. (2025) Effect of Mismatch repair deficiency on metastasis occurrence in a syngeneic mouse model. *Neoplasia (New York, N.Y.)*, 62, 101145.

Huber F, et al. (2025) A comprehensive proteogenomic pipeline for neoantigen discovery to advance personalized cancer immunotherapy. *Nature biotechnology*, 43(8), 1360.

Roussot N, et al. (2024) Case report: Immune response characterization of a pseudoprogression in a PD-L1-negative, TMB-low, KEAP1/STK11 co-mutated metastatic NSCLC. *Frontiers in immunology*, 15, 1437961.

Trivedi V, et al. (2024) mRNA-based precision targeting of neoantigens and tumor-associated antigens in malignant brain tumors. *Genome medicine*, 16(1), 17.

Zhang X, et al. (2024) Neoantigen DNA vaccines are safe, feasible, and induce neoantigen-specific immune responses in triple-negative breast cancer patients. *Genome medicine*, 16(1), 131.

Pham TMQ, et al. (2024) The T cell receptor ?? chain repertoire of tumor infiltrating lymphocytes improves neoantigen prediction and prioritization. *eLife*, 13.

Liu J, et al. (2024) Single-cell landscape reveals the immune heterogeneity of bone marrow involvement in peripheral T-cell lymphoma. *Cancer science*, 115(8), 2540.

Zeveerijn LJ, et al. (2024) The Innate Immune Landscape of dMMR/MSI Cancers Predicts the Outcome of Nivolumab Treatment: Results from the Drug Rediscovery Protocol. *Clinical cancer research : an official journal of the American Association for Cancer Research*, 30(19), 4339.

Garcia-Recio S, et al. (2023) Multiomics in primary and metastatic breast tumors from the AURORA US network finds microenvironment and epigenetic drivers of metastasis. *Nature cancer*, 4(1), 128.

Dalens L, et al. (2023) Exome-Based Genomic Markers Could Improve Prediction of Checkpoint Inhibitor Efficacy Independently of Tumor Type. *International journal of molecular sciences*, 24(8).

Panni UY, et al. (2023) Induction of cancer neoantigens facilitates development of clinically relevant models for the study of pancreatic cancer immunobiology. *Cancer immunology, immunotherapy : CII*, 72(8), 2813.

Calsina B, et al. (2023) Genomic and immune landscape Of metastatic pheochromocytoma and paraganglioma. *Nature communications*, 14(1), 1122.

Thibaudin M, et al. (2023) First-line durvalumab and tremelimumab with chemotherapy in RAS-mutated metastatic colorectal cancer: a phase 1b/2 trial. *Nature medicine*, 29(8), 2087.

Iorgulescu JB, et al. (2023) Antigen presentation deficiency, mesenchymal differentiation, and resistance to immunotherapy in the murine syngeneic CT2A tumor model. *Frontiers in immunology*, 14, 1297932.

Yang K, et al. (2023) Mutational pattern off homologous recombination repair (HRR)-related genes in upper tract urothelial carcinoma. *Cancer medicine*, 12(14), 15304.

Roelands J, et al. (2023) An integrated tumor, immune and microbiome atlas of colon cancer. *Nature medicine*, 29(5), 1273.