

The Role of NGS in Cancer Management [†]

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Abstract: During the last year's medical oncology has witnessed major changes from genomics to more accurate diagnostics to changes in clinical practice. We are, at the beginning of a new era in oncology, in which personalized treatment is based on tumor genomic alterations and characteristics. The possibility of mapping cancer-specific genomic mutations has opened opportunities for developing new drugs and molecules, some of which offered major benefits in clinical trials versus current practices regarding tumor response rate, PFS, DFS, and OS and integrated into clinical practice. FDA approvals of NTRK inhibitors in 2019 and Pembrolizumab for MSI-H and TMB high tumors regardless of tumor histology has marked an important step towards acknowledging the importance and implementation of NGS in cancer management. International guidelines highlight the use of NGS in several cancer types, for example, lung, prostate, biliary tract cancer, and others, while new drugs are being approved for specific cancer mutations. Overall, precision medicine is an exciting new emerging field under continuous development, with benefits for cancer patients.

Keywords: medical oncology; NGS; tumor genomics.

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Conflicts of Interest

The authors declare no conflict of interest.