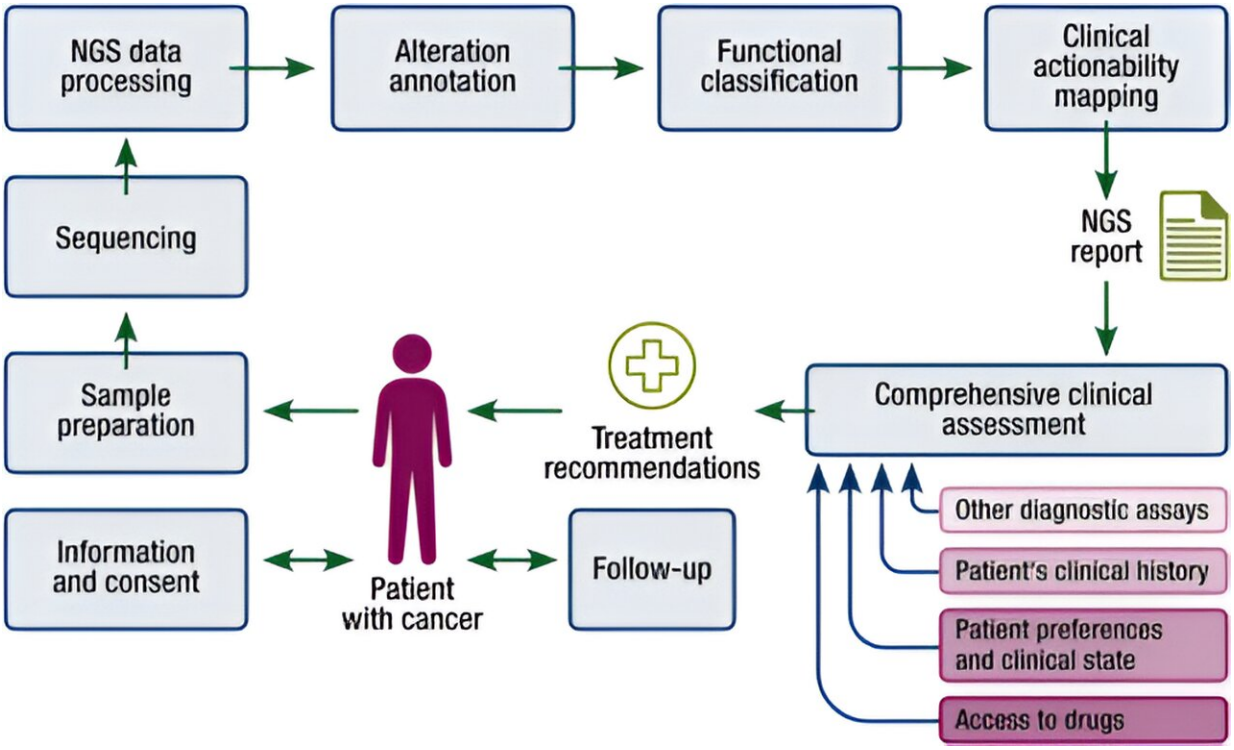
Medical Xpress

New guidelines on how to report clinical sequencing data help doctors make decisions about cancer treatment

August 16 2024, by Erika Rindsjö



Steps enabling clinical decision making based on NGS data. Credit: *Annals of Oncology* (2024). DOI: 10.1016/j.annonc.2024.06.018

Personalized medicine is transforming cancer treatment by tailoring therapies to the genomic profile of each tumor. Next-generation

sequencing (NGS) is key to this approach, but its complexity and inconsistent reporting have been hurdles. A recent paper in *Annals of Oncology* introduces new guidelines to standardize NGS reports, aiding clinicians in making informed decisions and improving patient outcomes.

The optimal management of cancer patients is increasingly reliant on individualized treatments guided by the genomic profiling of tumors. At the forefront of this revolution is next-generation sequencing (NGS), a technology that enables the analysis of hundreds or even thousands of genes at a relatively low cost. These insights are pivotal in selecting the most appropriate therapies based on the specific molecular characteristics of each patient's tumor, forming a cornerstone of modern precision oncology.

Standardized approach supports clinical decision-making

However, the interpretation of NGS assay results can be challenging for physicians. The lack of a standardized approach to preparing NGS clinical reports may limit the application and potential benefits of this technology. To address this issue, the Precision Medicine Working Group (PMWG) of the European Society of Medical Oncology (ESMO) has developed recommendations for presenting NGS results to support clinical decision-making in patients with solid cancers.

These guidelines are based on a consensus among international experts in genomics-based oncology, including perspectives from a patient advocate.

"The complexity of NGS data used in cancer care is rapidly increasing, and effective communication of the information to the medical teams is

crucial. Clear and standardized NGS reports are key to minimize uncertainties, reduce inequalities between centers with varying levels of experience, and optimize patient benefits from available treatment options," says David Tamborero, a senior researcher at SciLifeLab and Department of Oncology-Pathology and one of the senior authors of the paper.

The paper provides detailed guidance on how to structure NGS reports and the content to include in different sections. The recommendations are organized into priority levels, making them adaptable to various laboratory and clinical settings.

"It was important to achieve a broad consensus on how NGS findings should be reported to clinicians," Tamborero adds. We believe these recommendations will be valuable for all laboratories supporting clinical practice and clinical research, helping to harmonize efforts across centers and ensuring the best possible decisions for patients.

This initiative marks a significant step forward in the field of precision oncology, promising to enhance the clarity and utility of NGS clinical reports and ultimately improve patient outcomes.

More information: J. van de Haar et al, ESMO Recommendations on clinical reporting of genomic test results for solid cancers, *Annals of Oncology* (2024). DOI: 10.1016/j.annonc.2024.06.018

Provided by Karolinska Institutet