AI IN CLINICAL INSIGHTS FOR HEMATOLOGICAL MALIGNANCIES

MEDICAL FIELD, OR MEDICAL METHOD

Hematology

TYPE

☑ Decision support ☐ Autonomous decision making

CATEGORY

☐ Prevention ☐ Detection ☑ Diagnosis ☑ Treatment
☐ Other

DESCRIPTION

Watson for Genomics' variant interpretation was tested against manually curated expert opinions. It identified clinically actionable insights missed by manual interpretation.

AIM / PURPOSE

The study compared hematological tumor variant interpretation using an artificial intelligence decision-support system, Watson for Genomics, with expert guided manual curation.

OUTPUT / RESULTS

Watson for Genomics identified 9 more (33%) clinically actionable variants not found in manual assessment.

71% of the cases had at least one clinically actionable therapeutic alteration.

33% of the cases had genes that were targeted by a US FDA approved therapy.

20% of the cases without therapeutic alterations, Watson for Genomics identified additional diagnostic or prognostic insights.

AI METHODOLOGY

Combination of NLP and deep learning.

INPUT / SIZE OF THE DATA

54 South Korean patient cases with hematological malignancies were analyzed by Watson for Genomics. 10 cases were randomly selected for manual interpretation analysis.

REFERENCE DOCUMENTS / LINKS / PUBLICATIONS

Clinical insights for hematological malignancies from an artificial intelligence decision-support tool.
J. Clin. Oncology, Vol. 37, Issue 15 suppl.
https://ascopubs.org/doi/abs/10.1200/JCO.2019.37.15_suppl.e13023

SOURCE

IBM Watson Health