



ANSWERS FOR CANCER

## Genetron Health Presents Cancer Clinical Research Data at AACR Virtual Annual Meeting Highlighting the Sensitivity and Specificity of its NGS Technology in Precision Oncology

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BEIJING, June 30, 2020 (GLOBE NEWSWIRE) -- Genetron Holdings Limited ("Genetron Health" or the "Company", Nasdaq: GTH), a leading precision oncology platform company that covers full-cycle cancer care, presented data from 14 clinical research studies at the American Association for Cancer Research (AACR) Virtual Annual Meeting II held June 22 to 24. The presented data demonstrated the sensitivity and specificity of Genetron's industry-leading next generation sequencing (NGS) technologies utilized by cancer hospitals to detect genetic alterations for clinical management.

Data presented at the AACR Virtual Annual Meeting were generated in collaboration with more than 10 well-known cancer research institutions and hospitals in China. Genetron's innovative technologies, including library construction and enrichment, unknown gene fusion detection, and liquid biopsy testing, were featured in 14 clinical studies presented at the AACR meeting.

### One-Step Seq™ Method for Library Construction and Enrichment

Genetron's One-Step Seq Method is specifically designed for small to medium size panels and simplifies the traditional labor intensive library construction/enrichment experiments to a single mixture of DNA sample to their reagent and one PCR reaction, minimizing hands-on time and risk of contamination and reducing the total time for library construction to 1.5 hours. The operational simplicity of this One-Step Seq Method makes it easier for hospitals to conduct the testing at a lower cost, thus yielding better profitability for hospitals.

Poster 743 presented the research team's development of an all-in-one panel for brain cancer based on the Company's patented One-Step Seq Method to detect glioma driver gene mutations and 1p/19q co-deletion, requiring less biopsy and highly consistent with current technologies such as qPCR and FISH<sup>[1]</sup>.

Methylation of the MGMT gene promoter is a biomarker for increased sensitivity to alkylating agent-based chemotherapy. Poster 3186 presented how the team combined bisulfite conversion with amplicon sequencing of MGMT gene promoter based on One-Step Seq method to analyze MGMT promoter methylation status, the results of which were 94.4% consistent with the gold standard results<sup>[2]</sup>.

### New methodology for the discovery of novel gene fusion

Compared to single nucleotide polymorphism (SNPs), it is technically more challenging to detect gene fusions, in particular, novel unknown fusions. Poster 4149 presented the research team's development of an RNA-Capseq panel targeting 395 cancer genes to detect gene fusions. Lung cancer cell lines or hematological tumors with known fusion genes and the FFPE samples from 10 patients with unknown types of sarcoma were assessed. Compared with lncRNA-seq, the RNA-Capseq panel could pinpoint fusions with a relatively small amount of data, which makes it more affordable and accessible. Moreover, this method can identify fusions in cases of low tumor purity or poor RNA quality. Compared to FISH and RT-PCR, the RNA-Capseq panel can detect more fusion genes at one time, and also discover novel fusion subtypes<sup>[3]</sup>.

### Application of Liquid Biopsy Low-Frequency Mutation Detection Technology in clinical investigations

Genetron Health has launched several liquid biopsy-based tests for cancer diagnosis, early detection, and monitoring.

Poster 1991 presented a collaborative clinical study of neoadjuvant chemotherapy (NAC) treatment selection, in which a cohort of 25 patients with Stage II/III gastric adenocarcinoma after surgical treatment were enrolled. The research analyzed the mutation profiles of 50 plasma samples collected from the patients using its 179 cancer-related gene panel. Copy number instability (CNI) scores of ctDNA were calculated to reflect chromosome instability in ctDNA. The results indicated CNI score of pre-neoadjuvant chemotherapy (NAC) ctDNA is a potential biomarker of response and prognosis to NAC in gastric cancer patients before NAC treatment<sup>[4]</sup>.

Leptomeningeal metastases (LM), associated with poor survival, were much more frequently detected in NSCLC patients harboring EGFR mutations. Though EGFR-TKIs therapy significantly increased overall survival, many patients inevitably develop acquired resistance. Poster 723 presented a study enrolling 31 lung adenocarcinoma patients harboring EGFR mutations, who had received at least 6 months of EGFR-TKIs treatment before the diagnosis of LM. The research collected 10 ml of CSF and matched 10 ml peripheral blood. The results suggested that, during EGFR-TKIs treatment, the acquired resistance mutations in the LM for NSCLC patients were independent from those in extracranial lesions<sup>[5]</sup>.

Currently, ureteroscopy is commonly used in pathological tests before surgery. However, in addition to the trauma and infection risks attached to ureteroscopy, the possibility of exudation and adhesion of surrounding tissues significantly increased after the process. Hypertension in the cavity may cause tumor spread, and the use of ureteroscopy and biopsy may cause the recurrence of bladder tumors after surgery. The poster 2293 presented a study where urine from 150 hematuria patients with upper tract urinary disease and 100 healthy people were assessed. The liquid biopsy assay tested demonstrated a sensitivity of 94% and a specificity of 96% in cancer detection<sup>[6]</sup>. Meanwhile, poster 2296 presented a study that assessed urine from 109 hematuria patients with upper tract urinary disease, in which the liquid biopsy assay demonstrated a sensitivity of 83.5%, a specificity of 90%, NPV of 67.5%, and PPV of 95.7% of detection of cancers<sup>[7]</sup>. The urinary assay's high sensitivity, high specificity, and non-invasiveness make it a potential clinical alternative to ureteroscopy.

### Reference

[1] Min Shi, Sumin Geng, et al. An amplicon sequencing based all-in-one genetic testing panel for molecular classification and guiding individualized

treatment of brain cancer. Poster 743 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[2] Yukun Zhang, Min Shi, et al. Methylation MGMT gene promoter analysis based on a high throughput method combines bisulfite conversion with amplicon sequencing. Poster 3186 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[3] Gu Jin, Chunyang Wang, et al. Targeted RNA-Capseq provides new insight into clinical fusion detection. Poster 4149 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[4] Yongning Jia, Honglin Zhu, et al. Chromosomal Instability of Circulating tumor DNA Predicts Response to Neoadjuvant Chemotherapy In Gastric Cancer. Poster 1991 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[5] Xi Wu, Puyuan Xing, et al. Genetic profiling of cerebrospinal fluid cfDNA from NSCLC patients with leptomeningeal metastases reveals EGFR-TKIs resistant mutations independent of extracranial lesions (cases series). Poster 723 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[6] Yansheng Xu, Hongzhao Li, et al. A Urine-based liquid biopsy Method for Detection of upper tract urinary carcinoma. Poster 2293 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

[7] Hu Qu, Yu Zeng, et al. A Multicenter, Prospective Evaluation of Urine-Based ctDNA Assay for Urinary Cancers Diagnosis. Poster 2296 presented at AACR Virtual Annual Meeting II, June 22-24, 2020.

#### **About Genetron Health**

Genetron Holdings Limited ("Genetron Health", Nasdaq: GTH) is a leading precision oncology platform company in China that specializes in cancer molecular profiling and harnesses advanced technologies in molecular biology and data science to transform cancer treatment. The Company has developed a comprehensive product and service portfolio that cover the full-cycle of cancer care from early screening, to diagnosis and treatment recommendations, to continuous monitoring and continuous care.

#### **Forward-looking Statements**

This press release contains forward-looking statements within the meaning of federal securities laws, including statements regarding the potential benefits and advantages of Genetron Health's One-Step Seq™ Method, which involve risks and uncertainties that could cause the actual results to differ materially from the anticipated results and expectations expressed in these forward-looking statements. These statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. Such risks and uncertainties include those discussed under the caption "Risk Factors" in Genetron Health's filings with the Securities and Exchange Commission. These forward-looking statements are based on current expectations, forecasts, assumptions and information available to Genetron Health as of the date hereof, and actual outcomes and results could differ materially from these statements due to a number of factors, and Genetron Health disclaims any obligation to update any forward-looking statements provided to reflect any change in its expectations or any change in events, conditions, or circumstances on which any such statement is based, except as required by law. These forward-looking statements should not be relied upon as representing Genetron Health's views as of any date subsequent to the date of this press release. Investors are urged not to rely on any forward-looking statement in reaching any conclusion or making any investment decision about any securities of Genetron Health.

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