

## Median Technologies announces new outstanding performance for its iBiopsy® Lung Cancer Screening CADx<sup>1</sup> with a focus on stage 1 lung cancer characterization

- iBiopsy®'s Lung Cancer Screening performance (LCS) for stage 1 lung cancer reaches 93.1% sensitivity at 96.2% specificity.
- These results are critical for lung cancer characterization at an early stage, for which iBiopsy® demonstrates an extremely high specificity for a sensitivity close to 95%, thus reducing the percentage of false negatives & false positives, the latter being a recurring problem of lung cancer screening until now.
- Results will be presented at the annual conference of the Radiological Society of North America (RSNA, Chicago, IL, USA) on November 28, 2021 at 12:00 pm CT during the AI Showcase theater and at Median's booth #4849 from Nov 28 to Dec. 1 (RSNA exhibition dates).

**Sophia Antipolis, France** – Median Technologies (ALMDT:PA) announces new outstanding performance of its lung cancer screening (LCS) CADx to characterize malignant vs. benign lung nodules. New results specifically focus on the characterization of stage 1 lung cancer nodules, using Median's proprietary iBiopsy® deep learning algorithm on low-dose chest computed tomography (LDCT).

Lung cancer is the number one cancer killer globally, causing an estimate of 1.8m deaths, accounting for 18% of all cancer deaths in 2020<sup>2</sup>. This is largely due to late-stage diagnosis of the disease associated with poor 5-year survival. Based on information from the International Association for the Study of Lung Cancer (IASLC) staging project<sup>3</sup>, the 5-year overall survival rate for patients with stage 1 non-small cell lung (NSCLC) cancer is 68-92% whereas it is only 1-10% for patients with stage 4, and unfortunately over 40% of patients already have stage 4 disease at the diagnosis without screening. A noteworthy International Early Lung Cancer Action Program (I-ELCAP) cohort study of stage 1 cancer patients<sup>4</sup> revealed an excellent 15-year LCS survival of 92% which again serves to show how critical early stage diagnosis via lung cancer screening remains. Thus, discriminating between benign nodules and stage 1 cancers is crucial to catch the cancer when it is still manageable and curable, which is key in saving patients' lives.

New results released today are based on a cohort of 1,737 patients from the National Lung Screening Trial cases (NLST) consisting of a total of 16,249 lung nodules. The training set included 1,239 patients with 11,676 nodules and the test set included 498 patients having a total of 4,573 nodules.

Test sensitivity is the ability of a test to correctly identify patients who actually have the disease: the higher the sensitivity of the test, the lower the percentage of false negatives. Test specificity is the ability of a test to correctly identify patients without the disease: the higher the specificity of the test, the lower the percentage of false positives. In a sub-analysis on the stage 1 lung cancers, results show

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<sup>1</sup> A radiological CAde device is "intended to identify, mark, highlight or otherwise direct attention to portions of an image that may reveal abnormalities during interpretation of images by the clinician." A CADx device is "intended to provide information beyond identifying abnormalities, such as an assessment of disease." Source: FDA

<sup>2</sup> Globocan study 2020, <https://gco.iarc.fr/>

<sup>3</sup> PIIS1556086415000179.pdf

<sup>4</sup> [https://www.redjournal.org/article/S0360-3016\(19\)30110-5/fulltext](https://www.redjournal.org/article/S0360-3016(19)30110-5/fulltext)



an AUC of 0.984 with a sensitivity of 93.1 % and a specificity of 96.2 %, including stage 1A and 1B lung cancer nodules. For the earliest stage 1A cancer stage nodules, the AUC is 0.982 with a sensitivity of 92.1 % and a specificity of 96.2 %. Knowing the literature reported over 70% false positive rate with LDCT<sup>5</sup>, Median’s offering is poised to help radiologists optimize the management of screening patients helping eliminate the barriers to widespread screening adoption by decreasing false positive rates, and unnecessary biopsies and follow up scans which add to patient stress.

*“We are proud of our ability to demonstrate accuracy in the earliest onset of the cancer signals as we’ve been able to get an astounding 92.1% sensitivity in stage 1A lung cancer at a specificity of 96.2%. This represents a critical shift towards improvement in the patient management and survival, as iBiopsy® responds to the problem of false positives, one of the major barriers to the implementation of lung cancer screening programs”,* highlights Fredrik Brag, CEO and founder of Median. *“We will be presenting our results at the RSNA annual meeting next Nov. 28 during a specific session on AI in medical imaging and we are thrilled to share them with the radiologist community attending the largest imaging conference in the world”,* he added.

Results will be presented during the AI Showcase Theater at the RSNA Annual Meeting, on Sunday, 28 November, at 12:00 pm CT. Median’s team will be available at booth #4849 Level 3 South Hall (AI Showcase) for the duration of the industrial exhibition (Nov. 28 -Dec. 1). The RSNA Annual Meeting and Scientific Assembly, taking place in Chicago, IL, USA from Nov. 28 to Dec. 2, 2021 is the world's largest medical imaging conference and attracts nearly 25,000 professional attendees from 116 countries.

**About iBiopsy®:** iBiopsy® is based on the most advanced technologies in Artificial Intelligence (AI) and Data Science (DS), benefiting from Median’s expertise in medical image processing. iBiopsy® targets the development of AI digital biomarkers, to be used in several indications for which there are unmet needs regarding early diagnosis, prognosis and treatment selection in the context of precision medicine. iBiopsy® currently focuses on Lung Cancer, Liver Cancer (HCC) and Liver Disease (NASH)

Since 2020, Median’s iBiopsy® development program has been supported by the European Investment Bank (EIB) through a financial loan of €35 million under the Juncker Plan, the European Fund for Strategic Investments for research and innovation projects developed by companies with high growth potential.



**About Median Technologies:** Median Technologies provides innovative imaging solutions and services to advance healthcare for everyone. We leverage the power of Imaging Phenomics to provide insights into novel therapies and treatment strategies. Our unique solutions for medical image analysis and management in oncology trials and iBiopsy® for imaging phenotyping, together with our global team of experts, are advancing the development of new drugs and diagnostic tools to monitor disease and assess response to therapy. Median Technologies supports biopharmaceutical sponsors and healthcare professionals around the world to quickly and precisely bring new treatments to patients in need. This is how we are helping to create a healthier world.

Founded in 2002, based in Sophia-Antipolis, France, with a subsidiary in the US and another one in Shanghai, Median has received the label “Innovative company” by the BPI and is listed on the Euronext Growth market FR0011049824– ticker: ALMDT. Median is eligible for the French SME equity savings plan scheme (PEA-PME), listed on the Enternext® PEA-PME 150 index and has been awarded the Euronext European Rising Tech label. For more information: [www.mediantechologies.com](http://www.mediantechologies.com)

<sup>5</sup> Maxim, L.D., Niebo, R. & Utell, M.J. Screening tests: a review with examples. *Inhal Toxicol* **26**, 811-828 (2014)

**Contacts**

<b>Median Technologies</b> Emmanuelle Leygues Head of Corporate and Marketing Communications +33 6 10 93 58 88 <a href="mailto:emmanuelle.levgues@mediantechnologies.com">emmanuelle.levgues@mediantechnologies.com</a>	<b>Press - ALIZE RP</b> Caroline Carmagnol +33 6 64 18 99 59 <a href="mailto:median@alizerp.com">median@alizerp.com</a>	<b>Investors - ACTIFIN</b> Ghislaine Gasparetto +33 1 56 88 11 11 <a href="mailto:ggasparetto@actifin.fr">ggasparetto@actifin.fr</a>
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