MEDIAN TECHNOLOGIES

Valuation for the First Indications of iBiopsy®

11 May 2021

BUY

Target Price: **€33.8 (vs. €14)**

Upside: **173%**

Investment Case

- Strong growth for the iCRO business and an order book of more than €52.6m at end-March 2021
- First promising results for the iBiopsy® platform
- Expansion of indications in iBiopsy® research programmes
- Leading research partnerships
- Secured financing for 3 years

A Recognised Know-How in iCRO

Median Technologies is a software and service provider specialising in clinical solutions leveraging medical images. Through its iSee® platform and associated services (iCRO activity), the group targets directly biopharma companies or through other CROs in Europe, North America and China for their clinical trials in cancer research. The iCRO business now represents 100% of the company's turnover.

Internal Research Programmes: iBiopsy®

Thanks to the latest advances in cloud computing, big data and artificial intelligence, the group has developed a technology that allows access to information contained in images that were previously inaccessible: the iBiopsy® platform, which aims to develop innovative diagnostic tests and thus develop precision and predictive medicine. The first targeted indications concerned areas where current diagnostic solutions are highly insufficient and where the target population is large and growing: HCC and NASH (liver diseases), and immuno-oncology. On the strength of the initial results obtained, the directors have launched in early 2021 a clinical development in lung cancer, an area where the challenges of early detection are becoming increasingly important.

Integration of Research Programmes in Diagnosis

With a cash position of €39.8m at end-March 2021 (including €28m raised in March) and EIB financing (another €20m possible), the company has the means to self-finance the needs of the ongoing research pipeline programmes in HCC (recurrence and screening) in NASH and in lung cancer. We are now integrating these indications into our modelling, which leads us to revise upwards our operating loss forecasts over the next few years (EBIT expected at -€10.1m in 2021 and -€11.5m in 2022 vs -€9.1m and -5.2m previously), but to upgrade our valuation in order to take account of the potential offered by these developments.

Buy Rating, TP upgraded from €14.0 to €33.8

Driven by a very positive newsflow in 2020 and since the beginning of 2021, the share price has risen significantly (x6 since 1 January 2020), but in our opinion does not yet reflect the potential offered by the iBiopsy® platform. By integrating the diagnostic tests under development into our estimates and our valuation approach, we are raising our target price from €14.0 to €33.8, which represents a potential upside of 173%, reinforcing our Buy rating for the stock.

Market Data

Industry	Healthcare
Share price (€)	12,4
Market cap (€m)	180,9
Market Segment	Euronext Growth
Bloomberg	ALMDT:FP

Shareholders

Founders	6,9%
Canon	6,6%
Abingworth LLP	7,6%
Celestial successor Fund	8,9%
Furi Medical Sciencerg	10,3%
Autres	59,8%

€m (31/12)	2019	2020	2021e	2022e
Sales	**9,0**	**13,5**	**20,2**	**29,3**
Change (%)	*41,2%*	*50,6%*	*49,9%*	*45,0%*
EBIT	**-8,0**	**-8,8**	**-10,1**	**-11,5**
as % of sales	*-89,0%*	*-65,4%*	*-50,0%*	*-39,2%*
Net profit	-8,0	-12,8	-10,6	-12,6
EPS (€)	-0,66	-1,05	-0,68	-0,81
Change (%)	*20,3%*	*20,3%*	*20,3%*	*20,3%*
Dividend (€)	0,00	0,00	0,00	0,00
Yield (%)	*0,0%*	*0,0%*	*0,0%*	*0,0%*
FCF	**-4,6**	**-5,8**	**-8,0**	**-9,3**
ROCE	163,8%	78,6%	72,8%	66,8%
EV/SALES (x)	0,0	4,1	8,8	5,8
EV/EBIT (x)	0,0	-6,2	-17,6	-14,8
PE (x)	0,0	-5,3	-19,1	-15,9
Net debt	-6,5	-0,7	-27,8	-18,5
Gearing (%)	-509%	6%	-212%	-3337%

Midcap Partners estimates

Next event : H1 results

Past recommandations

Date	Recommandation
18/06/2020	Buy

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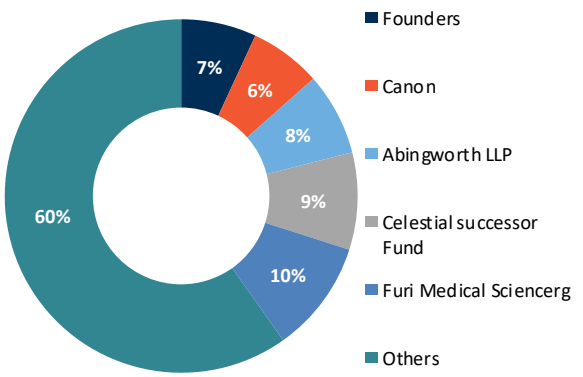
I. Overview of Median Technologies

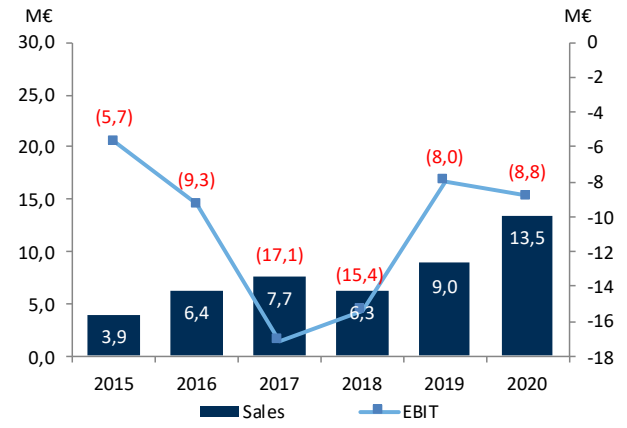
Description

Founded in 2002, Median Technologies provides innovative imaging solutions and services based on the power of phenomic imaging, coupled with the development of analysis algorithms through the use of artificial intelligence and cloud computing. The company has developed two proprietary platforms: iSee® (analysis and management of medical images in clinical trials) and iBiopsy® (discovery of new biomarkers with the aim of providing new diagnostic solutions) which aim to accelerate therapeutic innovation and improve the management of patients suffering from cancer and other chronic diseases, through the development of personalised and predictive medicine.

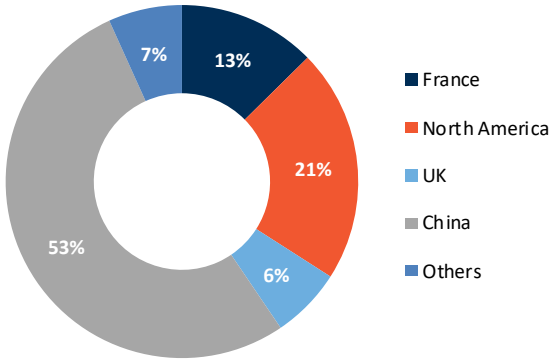
Shareholders as of 31 mars 2021



Sales and EBIT trends



Revenue breakdown by region



SWOT Analysis

Strengths

- A recognised and profitable iCRO business
- Located in Europe, USA and China
- Knowledge of regulation authorities (FDA, EMA, NMPA)
- Accelerating regional diversification
- Ability to attract major shareholders

Weaknesses

- Revenue still low even though it has risen sharply
- Overall results are loss-making
- Further investments need to be made, particularly in the iBiopsy® business

Opportunities

- Acceleration of iCRO deployment through partnerships with major CROs
- Publication of results of ongoing studies for the iBiopsy® platform: confirmation of its potential in particular as a diagnostic test
- New diagnostic fields
- Partnership with major laboratories

Threats

- iCRO business growth halted or orders cancelled
- Failure of research programmes for iBiopsy®.
- Difficulty in finding funding

Founded in 2002, Median Technologies is a software publisher and service provider specialising in clinical solutions leveraging medical images. The group offers its solutions to biopharmaceutical companies via its iSee® platform and associated services: analysis and management of medical images in the context of clinical trials, imaging CRO activity which still represents 100% of the company's current revenue in Europe, North America and China.

Based on the know-how developed in phenomic imaging (observation of the characteristics of an organism), the group has launched its own research programmes since 2016 via the iBiopsy® platform. Thanks to the latest advances in data science and artificial intelligence, in particular through recruitment and the creation of a team of data scientists in 2019, the technology deployed provides access to information contained in images that has not been available to date and aims to develop diagnostic solutions in the field of oncology or in pathologies where the needs in terms of detection and prediction are still poorly met, in particular in the early or very early stages.

II. Recognised imaging CRO Know-How

A. iCRO: iSee® Platform & Associated Services

The group has developed expertise in the field of solid tumour cancers, notably through the use of artificial intelligence, which enables the extraction of advanced biomarkers with a high level of quality. The iSee® proprietary imaging platform, combined with services, that allows an end-to-end managment of imaging workflows in clinical studies, and provides expert reading of images collected by customers in their clinical studies, automating and standardising lesion detection, selection and measurement, reducing human error and the number of missed lesions. Its use contributes to the reduction of variability in results and increases quality and thus efficiency of clinical trials.

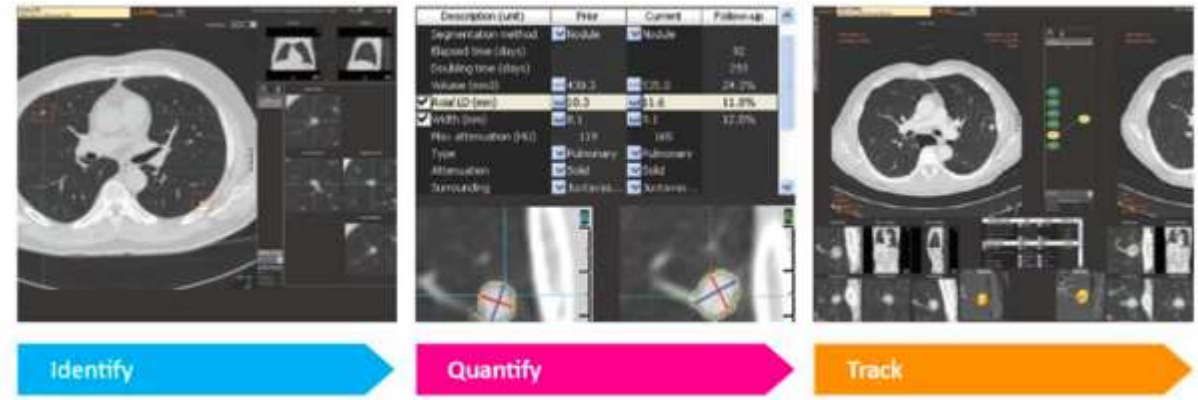
The company works directly with big pharma and biotech companies but also subcontracts with leading CROs in Europe, the US and China, and addresses clinical trials from phase I to phase III. The volume of invoicing (established on a per request basis) depends on the number of patients and the number of hospitals/organisations participating in the study: potential revenue of €100-200k for phase I studies (identifying the toxicity of treatments), €300k-1.2m of revenue for phase II studies (demonstrating the efficacy of the treatment and defining the optimal dose) and €1-4.2m for phase III studies (comparing the efficacy of the treatment against a placebo or an existing treatment).

Although this activity is carried out entirely paperless, it includes a component of support services that require a certain proximity to end customers. The company has teams on three continents: mainly in France for Europe (105 people at the end of 2020, the company's headquarters), in China for Asia (23 people) and in the United States for North America (13 people).

In the early phases of clinical trials iSee® provides data that is more representative of disease progression, accelerating Go-No Go decisions through access to advanced criteria and new biomarkers, comparison with Recist (tumour response progression criteria, Recist1.1, mRecist or iRecist), short turnaround times, provision of imaging reports and associated images, and integration of data into customers' databases

In the late phases, thanks to quality data (core of the device validated by the FDA, 510K), structured and documented, and the provision of complete reports, iSee® makes it possible to prepare registration with regulatory authorities (FDA, EMA, etc.) and reimbursement dossiers.

Illustration of the use of the iSee® platform



Source: Median Technologies

B. An Activity That Confirms Its Dynamism

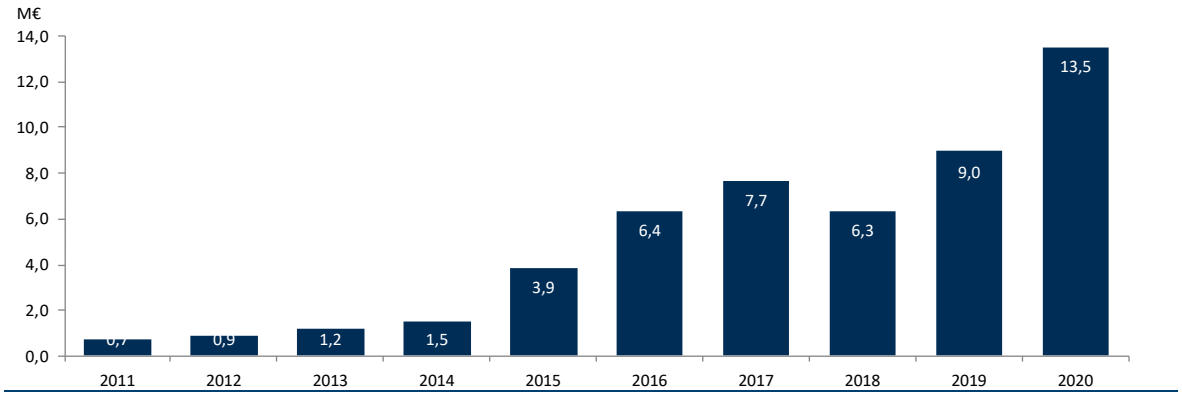
From 2014 to 2017, the group's teams more than doubled from 47 (annual average) to 109 people, with in particular the implementation of sales forces in Europe, North America and Asia. During the period, sales (iSee® platform and associated services only) increased from €1.5m to €7.7m (mainly North America and the United Kingdom). However, generated revenue has not matched the expenses incurred, with operating losses increasing from €5m in 2014 to more than €17m in 2017 (including iBiopsy® platform development costs).

Faced with deepening operating losses, management reacted in 2018 by discontinuing certain unprofitable activities (sale of patient care solutions, patient monitoring software tools and associated maintenance) and refocusing their direct marketing efforts in certain regions (China), customers (key accounts, targeted Biotech, etc.) or key events (trade shows and conferences). While the company benefits from recurring contracts with its historical customers, to fuel its growth on the American and European markets, the group has also opted for indirect sales mode (Syneos currently being ramped up) and informal collaborations with global CROs (28.4% of sales in indirect sales in 2020 compared to 3% in 2019).

These measures were initially accompanied by a decrease in activity: revenue fell to €6.3m in 2018 (-18%). Thanks to the opening of the subsidiary in mainland China (Shanghai), sales in this country have accelerated significantly, enabling growth to be revived in 2019, with sales up to €9.0m, +41%.

This success has been more than confirmed in 2020, with growth of 51%, with sales of €13.5m, despite the effects of the health crisis thanks to the increase in the number of clinical studies and increase in the weight of phase III (positive mix effect on revenue). With a gain of 27 phases III in 2020, compared with only 2 in 2017 or even 9 in 2018, the group benefit from an embedded positive mix-effect. Activity was driven by all regions where the group is present: +81% in China, +70% in France, +32% in the UK, +7% in North America and +36% in the rest of the world.

Group revenue trends: iCRO



Source: Median Technologies

Despite the Covid-19 effect (cancellation of certain research programs as communicated in Q2 and Q3), order intake remained strong, with a backlog of €51.7m at the end of 2020 (43% in China, 17% in the United States and 40% for Europe and the rest of the world), +35%.

Order book trends for the iCRO

M€	2014	2015	2016	2017	2018	2019	2020
Order book	11,0	21,3	16,0	22,5	23,7	38,3	51,7
Change		93,6%	-24,9%	40,6%	5,3%	61,6%	35,0%

Source: Median Technologies

Over the course of its work, the group has collected a very large amount of data (clinical knowledge) and has developed know-how in image processing and management (big data and data science), in artificial intelligence applied to this specialty, and in the regulatory field. Based on these developments and know-how, management decided to target other applications in order to identify the specific signatures of certain chronic diseases for their early detection, quantification of their severity and their follow-up. The objective is twofold: to guide clinicians in their therapeutic decisions in the context of predictive and precision medicine, and to provide new decision-making tools for the development of new therapies. The R&D program on the iBiopsy® platform was thus started in 2016 and has accelerated from 2018-19.

III. Ambitions for Diagnostic Solutions: iBiospy®

A. Imaging tools and clinical data combined with cloud and big data technologies: the iBiopsy® Platform

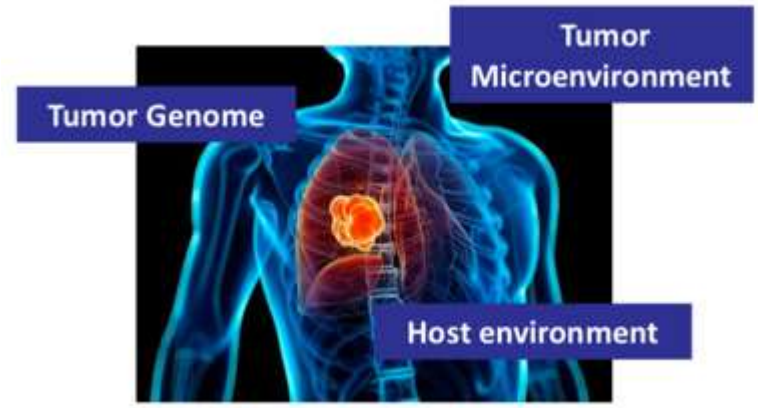
To achieve the goals associated with the iBiopsy® project, the teams have been strengthened from 2018 onwards in order to carry out in-house research programs, and thus set up and technically validate the digital platform. In 2019, a team of data scientists was also set up to complement the expertise of the group's teams. The objective is to identify new biomarkers and develop algorithms that will make it possible to diagnose and monitor certain pathologies, in particular certain cancers for which diagnosis is still complicated to date, using images from standard modalities (MRI, CT, etc.).

The strategy consists in extracting signatures from proprietary statistical images with a lesion-agnostic approach, considering the organ as a whole. This approach improves tissue coverage, which provides more detailed information at the pixel level, and improves image interpretability compared to a standard lesion segmentation approach. By linking imaging data with other patient data sources (clinical, histological, clinical data, etc.) it is possible to access new information.

The iBiopsy® platform thus aims at identifying imaging biomarkers (signatures in the image that are like the diseases' "fingerprints") that correspond to a clinical reality. iBiopsy® seeks, for example, to identify signs in the image that correspond to certain types of cancer (e.g. lung cancer), or to liver fibrosis, or to responders/non-responders to immunotherapy. Ongoing clinical studies seek to compare the image's sign with a ground truth such as histopathology (biopsy) or genetic mutation. Once the correlation has been made, this should make it possible to avoid invasive procedures by developing reliable image biomarkers.

The platform should allow for the development of diagnostics in a multitude of clinical indications, hence the importance of the collaboration agreement with the AP-HP to have access to quality data in several indications.

Illustration of the use of the iBiopsy® platform in immuno-oncology



Source: Median Technologies

Pheno ID: a solution for personalised medicine

The target is to develop solutions that will enable the probability, detection, diagnosis and prognosis of the evolution of certain pathologies in order to determine the best therapeutic approach, or even to select the appropriate treatment for each patient, and thus to provide first-rate diagnostic support to practitioners in the follow-up of their patients, and this at early or even very early stages for certain pathologies: Pheno ID Tools.

Regarding indications, the first targets identified, and on which research is being conducted via the iBiopsy® platform, concern, to date, the following major areas: in the field of lung cancer (Pheno IDx LCS), where the stakes related to early detection are increasingly high liver diseases: NASH (Pheno iDx NASH) and CHC (Pheno iDx Liver), and the problem of responders and non-responders to immuno-oncology treatments, where current solutions in terms of diagnosis or treatment are still very inadequate or even non-existent.

B. Key Issues and Research Fields for Targeted Indicators

It should be noted that detailed issues for the targeted indications are presented in the appendix of the research note.

Lung cancer

- The main issues:

⇒ An increasing number of cases
⇒ High mortality rate
⇒ Asymptomatic at an early stage
⇒ The earlier the cancer is diagnosed, the better the chances of survival
⇒ Diagnostic solutions still imperfect: high number of false positives

- Median Technolgies' research fields

The challenge of the iBiopsy® platform is to develop a model based on artificial intelligence algorithms (Lung Cancer Screening), which would make it possible, from a low-dose CT image, to identify lesions in the lungs and to characterize these lesions (benign or malignant) in such a way as to limit the number of false positives and over-diagnoses. The objective is twofold: to develop a diagnostic test for routine clinical use, but also for screening campaigns.

Hepatocellular carcinoma (HCC)

- Main issues:

⇒ The third leading cause of cancer mortality
⇒ Asymptomatic at an early stage and difficult to detect (tumor <1-2 cm)
⇒ Prognosis still impossible to establish at an early stage even if diagnosed: it's *wait & see* if the tumour evolves
⇒ Treatment is necessary beyond a certain stage, but it is difficult to determine the most appropriate treatment and to establish a prognosis

- Median Technologies' research fields:

The research conducted by Median Technologies via the iBiopsy® platform is part of this process, and aims to detect HCC, particularly at early stages, on the basis of classic imaging tools, and thanks to the provision of new biomarkers, to be able to determine a treatment adapted to each patient, whatever the stage of the disease. The earlier HCC is detected, the greater the probability of survival. For patients at an advanced stage, earlier detection of the disease should reduce treatment costs.

In addition, based on the tumour's analysis, its microenvironment or the patient's own environment, the group aims to develop new non-invasive biomarkers that will make it possible, on the basis of standard imaging tools, to predict the evolution of the disease: probability of recurrence for patients who will have chosen a curative option (partial removal of the liver, possible in early stages), need for adjuvant treatments (second line, complementary to a first line treatment), or no action for patients at an early stage but for whom the tumour will not evolve; but also to measure the effects of treatments (response to immunotherapy treatments).

In the case of clinical trials, the objective is to select potentially receptive patients (prior screening) to reduce inclusion failures even at early stages.

NASH Disease

- Main issues:

⇒ A growing prevalence, particularly linked to deviant eating habits
⇒ A disease most often asymptomatic
⇒ Irreversible beyond stage 3 and no specific treatment to date (transplantation necessary)
⇒ Main diagnostic solution to date: histological analysis, but invasive gesture therefore subject to complications, not always relevant (analysis of cells from only a part of the liver and difficult to repeat over time), and expensive
⇒ Non-invasive diagnostic tests are still imperfect

- Median Technologies' research fields:

In an attempt to meet some or all of these needs, Median Technologies has launched an R&D program in the field of NASH. The objective is twofold:

I) to participate in studies for the discovery of a treatment by identifying a) biomarkers that allow the selection of patients to be included in the study, thus reducing the failure rate of inclusions and the use of biopsy (invasive diagnostic method), and thus costs; and b) biomarkers that allow the measurement of the evolution of the disease (measure of effectiveness of the treatments that are the subject of the clinical study), and

II) to develop analytical tools/biomarkers that make it possible to diagnose the disease even at an early stage (reversible and thus save lives) and to measure its evolution (effectiveness of lifestyle change measures and, if necessary, of treatment). In addition to the benefits for the patient, more rapid management of the disease should make it possible to reduce severe forms of fibrosis and recourse to transplantation, and thus the costs of treatment.

Issues in immuno-oncology

- The main challenges of these new personalised treatments:

⇒ Low proportion of responding patients
⇒ Rapid measurement of the probability of response is still difficult
⇒ Treatments are sometimes toxic for some patients
⇒ Very expensive treatments

- Median Technologies' research fields:

The challenge of the iBiopsy® platform is to develop a model which, on the basis of non-invasive biomarkers, makes it possible to determine which treatment will be best suited to each patient, depending on the tumour, the characteristics of the patient himself or herself, or his or her environment.

In the case of clinical studies, the objective is to select potentially receptive patients (prior screening) to reduce inclusion failures, and to measure the efficacy or otherwise of the molecules that are the subject of the research program during the course of the study to enable pharmaceutical companies to adapt the drugs (formulas, doses, etc.) and/or the study itself, leading to a reduction in the costs of the studies and their duration.

In the case of routine clinical trials of patients with solid tumours, the challenge is to identify as early as possible which patients may be receptive and to which type of treatment they should be referred. Once the treatment has been started, the use of the iBiopsy® platform should make it possible to determine as quickly as possible whether the patient is really receptive to the treatment, and/or whether there are toxic side effects, and thus to be able to react quickly if necessary. Beyond the patient benefit, this should reduce treatment costs while increasing their effectiveness.

Although the iBiopsy® business has not yet generated any revenue, it represents around 20% of the teams to date and three-quarters of the R&D teams. After an initial R&D phase, work really started in

2018 and has already resulted in several major achievements: €35m financing obtained from the European Investment Bank (H1 2019), signing research agreements with AP-HP (H1 2020) and the University of San Diego (February 2021), promising results from research programs (HCC: June 2020, immunotherapy: September 2020 and NASH November 2020), and extension of targeted indications: lung cancer (February 2021).

C. Major Steps

€35m Financing from the EIB with Warrants

In December 2019, Median Technologies announced the signing of a €35m financing agreement the European Investment Bank (EIB), under the Juncker Plan, to fund the iBiopsy® platform investment program.

The first tranche of €15m was drawn in April 2020. The contract then provides for the release of the second and third tranches (of €10m each) in the coming years, subject to the fulfilment of certain precedent conditions. This financing will be repaid in a single instalment at the end of a period of five years from the date of payment of the relevant tranche (i.e. April 2025 for the first tranche).

The release of the tranches will be accompanied by the issue of warrants to the EIB (subscription price of €0.01): 800,000 warrants when the first tranche is paid in 2020, and 300,000 warrants when the second tranche is released. The fund raising at the beginning of 2021 has enabled the conversion price of the 2020 BSAs to be set at €8.34 per share (27.5% discount compared to the fund raising carried out at €11.5). The life of these warrants is 15 years, but except in exceptional cases (change of control, etc.), they will not be exercisable before April 2025. It should be noted that, as the EIB is not intended to be a company shareholder, in the event of exercise of these warrants after April 2025, the shares created will be immediately sold.

As for the first tranche, in case of drawing of the second tranche (milestone to be reached beforehand), the exercise price of the 300,000 warrants will be based on the price of the last fundraising carried out to which a discount will be applied. It is therefore unknown at this date.

Research Agreements

- Contract with the AP-HP

In April 2020, management signed a research collaboration contract around the iBiopsy® platform with L'AP-HP (Assistance Publique des Hôpitaux de Paris), one of the largest sources of medical data in the world, with teams supervised by renowned physicians. The collaboration agreement concerns to date two clinical studies on liver cancer involving the hospitals Pitié-Salpêtrière and Paul Brousse. This framework agreement offers the possibility of extending the collaboration to other studies or clinical indications.

The first study, PHELICAR, aims to study the phenotypic heterogeneity of liver cancer (the result of complex development systems influenced by genes as well as environmental factors) and its impact on the diagnosis and prognosis of patients, based on medical images. The second study, LIVER IBIOPSY, should allow the identification, again from medical images, of phenotypes (characteristics specific to each person) of liver lesions at high risk of recurrence, which will have an impact on the follow-up and treatment of these patients at risk. Preliminary results are expected in early 2022.

Liver cancer is the fourth leading cause of cancer death worldwide in all populations (GLOBOCAN 2018 Study) with a 5-year survival rate of 18%. It is a cancer for which therapeutic strategies are difficult to implement because of the very high heterogeneity of liver tumours. These two studies address unmet medical needs in terms of early diagnosis, patient prognosis and dynamic monitoring of treatment response, and aim at the clinical validation of iBiopsy® as an innovative, reliable and non-invasive technology for liver lesion phenotyping. These studies are part of the context of an increasingly predictive and personalised medicine.

- Contract with the University of San Diego

In February 2021, management announced the signing of a research collaboration agreement with the University of California San Diego to conduct a retrospective clinical study of the severity of liver fibrosis in patients with NASH.

The study will be coordinated by Kathlyn Fowler, a Doctor of Diagnostic Radiology and professor at the University who has a study and care centre specialising in liver diseases and is internationally renowned in particular in NASH.

The cohort will involve 300 patients, and will use the iBiopsy® platform on retrospective data, which should allow to validate the promising results obtained in the first phase of the clinical study (communicated in November 2020), i.e. to be able to accurately and non-invasively distinguish the stage of fibrosis (early or advanced), and to predict if patients are at risk of developing cirrhosis or liver cancer. Results are expected in Q1 2022.

For the group, these agreements present several major interests, the main ones being: i) the contribution of the clinical expertise of the AP-HP hospitals and the University of San Diego, and ii) access to a significant amount of data (clinical data and quality imaging data), which should contribute to optimize the artificial intelligence algorithms developed in iBiopsy® and thus validate the platform from a clinical point of view on large cohorts, with a controlled budget (access to clinical data is often very expensive).

Promising Initial Results

- HCC

The group conducted trials of fibrosis analysis on HCC patients. The results were compared with those obtained by other invasive (biopsy) and non-invasive (blood sampling or other imaging methods) analysis methods. A first phase of testing was conducted and then the method was improved and validated on a cohort of 94 patients (historical database).

Like all diagnostic tests. The main data analysed are the sensitivity and specificity of the tests. The sensitivity (or selectivity) of a test measures its capacity to give a positive result when a hypothesis is verified. It is opposed to specificity, which measures the ability of a test to give a negative result when the hypothesis is not verified.

Sensitivity and specificity measurements have shown that the non-invasive fibrosis biomarker obtained via the iBiopsy® platform allows for the identification of high-risk tumour patients more reliably than the methods currently used in imaging. The use of this biomarker could allow for a better therapeutic orientation for patients (recourse to surgery or not, immediate treatment after surgery, etc.).

These initial results were published in June 2020, and the group must now confirm the quality of its methods and solutions with a larger cohort of patients, patient backgrounds and imaging tools, hence the partnership with the AP-HP to access qualified databases

- NASH Disease

The group has launched a preliminary retrospective study of NASH patients with F2 or F3 fibrosis (limit of reversibility of the disease, study conducted on 152 patients). The objective of the study was to identify a biomarker that would allow to determine if the patient is at an early or advanced stage of the disease thanks to the iBiopsy® platform and with the help of imaging tools such as MRE (Magnetic Resonance Elastography) and MRI (Magnetic Resonance Imaging)

The first results for both MRE (imaging tools with low response) and MRI show promising specificity and sensitivity scores. Thanks to the optimization of the algorithms used in the iBiopsy® approach

(learning phase at the beginning of a study), the group aims to confirm that the non-invasive biomarker obtained could discriminate early fibrosis from advanced fibrosis.

These first results were published in November 2020, the partnership with the University of San Diego aims to confirm the quality of its methods and solutions with a larger cohort of patients.

- Immuno-oncology

Using its iBiopsy® platform, the group has identified a biomarker derived from CT imaging that can identify patients who are responders to a specific immuno-oncology treatment (based on anti-tumor immunity of CD8+ cells). The study was conducted on a cohort of 44 liver cancer patients.

It was demonstrated that iBiopsy® was a better predictor of the tumour microenvironment, thus enabling the prediction of the patient's diagnosis (press release published in September 2020). In the case of clinical studies, the challenge of these predictive biomarkers is to allow the selection of potentially receptive patients and thus reduce inclusion failures. In the case of routine use, the challenge is to identify which patients may be receptive and to direct them to the right type of treatment.

As for the other applications, these initial results need to be confirmed on larger cohorts of patients. In immuno-oncology, the company will have to rely on partnerships for its research, in particular to gain access to patient data.

With secured financing and two leading research partnerships, the development of the iBiopsy® platform is well underway, which has notably led to the extension of research programs to a new indication: lung cancer.

- Lung cancer

In February 2021, the group announced the launch of a study on the early diagnosis of lung cancer via its iBiopsy® platform using a database of 17,000 patients made available by the NIH (National Institutes of Health) to companies conducting research in the field of lung cancer diagnosis.

The target of this study, based on a first cohort of 1,800 patients, is to train and validate the artificial intelligence algorithms that have been developed for several months within a solution (Lung Cancer Screening). Using low-dose CT imaging, the group aims to identify lung lesions and characterize these lesions (benign or malignant) in order to limit the number of false positives and over-diagnoses. Preliminary results are expected in H2 2021, and the algorithms should then continue to be trained on new patient cohorts.

For the iBiopsy platform, beyond the continuation of research programs, the short-term objective is to establish new partnerships (research and technological), to protect the R&D work via patent applications and to launch regulatory work, in particular with the FDA to reference the technologies developed and to enter into the reimbursement nomenclatures (based on the codes already granted to existing diagnostic tests).

In the medium-term, the group could generate significant revenue from the provision of its technology and services in the context of research programs, in terms of diagnosis or patient monitoring, but also in the context of screening campaigns. In addition, based on the principle of the platform, the iBiopsy® technology should continue to be extended to other forms of solid tumor cancers, such as ovarian or prostate cancer, or to other conditions in existing indications (e.g., lung lesions), thereby generating long-term growth opportunities.

IV. Outlook

A. Long-Term Business Driven by iCRO & iBiopsy®

iCRO

The group's customer base is quite diverse, consisting of both Big Pharma but also smaller Biotechs working in very targeted areas. The first customer represented just under 16% of revenue in 2020 and the top 5 just under 54%. In terms of backlog the top customer accounted for 15% of the total and the top 5 just under 52%. But whether it is for the turnover or the backlog, the podium is very variable from one year to the next. In addition, the geographical expansion and the development of new activities with iBiopsy® should contribute to the diversification of the client portfolio.

In contractual terms, the group has not set up distribution agreements as part of its indirect sales strategy. Sales are made either through subcontracting with large CROs or directly with end customers, as the track record of the services delivered by Median Technologies offers revenue recurrence with certain customers/principals, or even revenue growth.

With a backlog of €51.7m at end-2020, up 35% compared to 2019 (€52.6m at end-Q1 2021, the group involved in more than 130 studies including 43 phase III trials), which is expected to be completed within 2 to 3 years, the iCRO business offers rather good visibility and is expected to remain dynamic in the years to come.

Thanks to its presence on three continents, with notably a reinforcement of the teams in China, the group should remain supported by the dynamism of oncology research worldwide, by the recurrence or even the increase in activity with existing clients, and by the continuation of the commercial conquest with the arrival of new clients. The marketing strategy should continue with a direct approach targeted at pharmaceutical and biotechnology companies and the use of indirect sales (partnerships with global CROs in particular).

Even if the health crisis continues to disrupt research activities worldwide, the iCRO activity has confirmed its dynamism with a first quarter revenue of €5.2m for 2021, up by almost 83% compared to Q1 2020, and +28% compared to Q4, testifying to the group’s dynamism.

iBiopsy®

For the iBiopsy® project, the financing obtained from the EIB (of which €15m was already received in H1 2020) and the fundraising carried out at the beginning of 2021 (€28m at €11.5 per share) should cover investments around a few targeted indications, namely:

- A test for the early detection of lung cancer by limiting/reducing false positives compared to the use of low-dose CT alone
- A test for the evaluation of NASH and tests to evaluate patient response to treatment
- A test for early detection and diagnosis of HCC and a test for prognosis of HCC (probability of recurrence, promising first results in the analysis of advanced stages)
- A test to identify potential responders to immuno-oncology treatments to allow biopharmaceutical companies to better target the efficacy of their treatment during the clinical testing phases and to match the right treatment to the right patients in the clinical routine

Additionally, an evaluation of commercial strategies for the reimbursement of tests, and regulatory strategies, particularly with regard to the FDA (Food and Drug Administration), have also been launched. In order to accelerate the process, the company recruited at the beginning of 2021, in France and in the United States, with the arrival of Thomas Bonnefont as Director of Operations and Commercial in charge of the commercial strategy for the marketing of iBiospy® products, and Mike Doherty as Head of Strategy and Product Development. Mike Doherty will be responsible for defining and implementing regulatory plans for iBiospy® products in order to obtain marketing authorisations in the United States (FDA) and Europe (EMA), as well as the strategy for acquiring clinical data and evaluating the relevance of data sources. The latter will be able to rely on the constitution of a team in the field of strategic marketing and a team dedicated to the field of "payers" (public or private health organizations), but also on the know-how of the iCRO teams that have already participated in research programs on products that have been put on the market (FDA audit for the United States and NMPA or National Medical Products Administration for China in particular).

Management also intends to pursue its partnership strategy for this division:

- Clinical partnerships with healthcare institutions, the first of which was signed in March 2020 with the AP-HP and the second in February 2021 with the University of San Diego: clinical validations of the algorithms, evaluated like any other diagnostic solution (sensitivity or ability to detect, specificity or ability to detect false negatives and not produce false positives, etc.), with the advantage of being able to use retrospective data
- Partnerships with biopharmaceutical companies worldwide: co-development agreements in a given indication to determine a biomarker that will make it possible to evaluate whether or not a treatment is working, and this rapidly (e.g. in immuno-oncology), or to access patient data provided by the partner to feed the iBiopsy® platform in a new indication
- Technology partnerships to enable the deployment of the iBiopsy® platform through the cloud, and the development of non-invasive biomarkers, which will be made available to healthcare institutions for clinical routine and to biopharmaceutical companies for research and development programs. Partnerships to improve the platform are also possible, such as in the field of artificial intelligence

Finally, the group should deploy a strategy of intellectual property protection with several patents in progress in Europe, the United States, China and Japan.

In the long-term, the division's revenue should therefore be diverse:

⇒ from participation in research to identify new biomarkers that will be integrated into new diagnostic solutions;
⇒ from the use of the iBiopsy® platform by biopharmaceutical companies and research institutions (payment per request);
⇒ from diagnostic tests that will be developed by the group: remuneration per diagnosis that could be reimbursed on the basis of the classification of current diagnostic imaging tests or on the basis on new category.

Business Outlook

Given the performance achieved by the iCRO division over the last few years (large accounts opened, ramp-up and recurrence), the backlog posted at the end of March, the dynamism of the underlying market and the company's positioning in China (the market's growth driver today), we have incorporated sustained growth assumptions for the iCRO division over the next few years: +50% expected for 2021 (+83% in Q1), +42% in 2022, and +31% in 2023, allowing for a near tripling of the division's revenue over three years.

For the iBiopsy® business, given the progress of the group's research programs (initiated in 2016 and accelerated as of 2019), we estimate that revenue from access to the platform and participation in research work should arrive within two years, with a gradual take-off in the first few years. The added value of the iBiopsy® platform should probably allow us to set up higher rates than with the iCRO offer (iSee® platform and associated services).

Additionally, the first targeted indications offer a significant potential, the FDA and the EMA recognize for example the need for a non-invasive biomarker to sort patients included in trials concerning anti-fibrotics, in order to define homogeneous patient cohorts for the validation of new treatments by biopharma, and thus increase the statistical power of the trial data. In addition, laboratories need a reliable diagnosis of fibrosis in patients to evaluate the response to treatments, and the regulatory authorities, FDA and EMA, advocate the use of tests allowing the follow-up of patients in clinical routine. The issues are the same in the field of immunotherapy, with upstream identification of potentially responsive patients and rapid detection of non-responders.

Revenue from participation in research projects on the iBiopsy® platform and from the platform's provision could thus be significantly higher than those generated by the iCRO activity, and with much higher margins (provision of software tools, few associated services). However, at this stage, it is still difficult to anticipate such a scenario and, above all, to determine the timeframe. As a precaution, we therefore anticipate lower revenue for the iBiopsy® division (revenue from participation in research work and access to the platform) but with faster growth. Indeed, we believe that given the customer accounts already opened in the iCRO activity, the increase in revenue should be faster than for the first platform developed by the group (revenue increased from €1.0m in 2010 to €13.0m in 2020).

The third source of revenue from the iBiopsy® platform, diagnostic tests, the time required for research, marketing and adoption by practitioners is more difficult to estimate. As a precaution, we have not included revenue in our 3-4 years model. As the group targets therapeutic areas where diagnostic solutions do not yet provide a totally satisfactory response, if successful, the use of the iBiopsy® platform should be facilitated and could represent very significant, recurring and highly profitable revenues (scalability of the analysis tool). Indeed, beyond the support of regulatory authorities, the development of efficient diagnostic solutions will undoubtedly be well received by people at risk or who consider themselves to be at risk, and who could in this case even become applicants/prescribers for the use of these diagnostic tests.

Summary of Business Forecasts by Division

M€	2017	2018	2019	2020	2021E	2022E	2023E	2024E
iCRO	**7,7**	**6,3**	**9,0**	**13,5**	**20,2**	**28,6**	**37,4**	**45,5**
Change	21,0%	-17,5%	41,2%	50,6%	49,9%	41,5%	30,7%	21,7%
iBiopsy®	**0**	**0**	**0**	**0**	**0**	**0,7**	**2,0**	**4,0**
Change	-	-	-	-	-	-	186%	100%
o/w Plateform access	-	-	-	-	-	0,5	1,5	3,0
o/w Research works	-	-	-	-	-	0,2	0,5	1,0
o/w Diagnostic testing	-	-	-	-	-	-	-	-
Total Sales	**7,7**	**6,3**	**9,0**	**13,5**	**20,2**	**29,3**	**39,4**	**49,5**
Changes	**21,0%**	**-17,5%**	**41,2%**	**50,6%**	**49,9%**	**45,0%**	**34,4%**	**25,7%**

Source: Midcap

Overall, we expect the group's sales to grow by 50% in 2021, to €20.2m, and by an average of 35% per year over the following three years.

Note that the group has not benefited from significant subsidies in the past, but it does benefit from the Research Tax Credit (accounted for as a deduction of personnel costs and taxes before 2014), up to €1.4m in 2020, including the innovation tax credit (totalling more than €11m since 2011, the year of the IPO).

Research Tax Credit Trends

K€	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CIR	**757**	**1 014**	**977**	**978**	**859**	**1 024**	**1 340**	**1 592**	**1 409**	**1 420**

Source: Median Technologies

B. Results Reflecting the Pace of Ongoing Studies

With the launch of iBiopsy®, the desire to market the company's products directly, and the outsourcing of functions related to iCRO, operating expenses rose sharply over the period 2016-2017. Thanks to the reorganization measures carried out from 2018 onwards and continued in 2019 (headcount reduction, use of indirect sales channels, or internalisation of certain production tools), operating losses have been significantly reduced: -€8m in 2019, compared to -€17.1m in 2017. Unsurprisingly in 2020, with the acceleration of research programs within the iBiopsy® platform, to the strengthening of teams (research but also services for iCRO), and the increased use of service providers for independent reading of images in connection with the increase in iCRO activity, operating losses have been deepened: -€8.8m.

It should be noted that the iSee® platform and associated services (iCRO activity) are now profitable. The operating loss comes only from the ongoing developments for the iBiopsy® platform fully expensed in operating expenses (no capitalisation of R&D expenses at this stage).

Changes in operating expenses and operating income

M€	2014	2015	2016	2017	2018	2019	2020
Sales	**1,5**	**3,9**	**6,4**	**7,7**	**6,3**	**9,0**	**13,5**
External charges	2,0	3,6	6,1	9,2	10,4	7,5	9,5
0/w subcontracting	*0,2*	*0,6*	*1,7*	*2,5*	*2,9*	*2,7*	*5,0*
0/w rents	*0,2*	*0,3*	*0,6*	*0,8*	*1,0*	*0,5*	*0,2*
0/w external services	*0,1*	*0,5*	*0,7*	*1,2*	*1,4*	*0,6*	*0,6*
o/w third parties fees	*0,7*	*1,3*	*1,4*	*1,9*	*1,7*	*1,5*	*2,1*
0/w external staff	*0,0*	*0,0*	*0,1*	*0,5*	*0,6*	*0,2*	*0,0*
0/w transport and mission costs	*0,4*	*0,6*	*0,7*	*1,2*	*1,1*	*0,8*	*0,2*
Labour costs	3,9	5,7	8,7	14,9	10,4	8,6	11,7
Average staff	*47*	*57*	*84*	*109*	*103*	*87*	*125*
Depreciation	0,1	0,1	0,4	0,3	0,7	0,5	0,7
EBIT	**-4,5**	**-5,7**	**-9,3**	**-17,1**	**-15,4**	**-8,0**	**-8,8**

Source: Median Technologies

It should be noted that FY2020 amounted to -€4m, essentially linked to the EIB loan: of which €0.8m for the interest paid and €3m reflecting the allocation of the BSA (non-cash impact). The reported net loss was thus -€12.8m compared to -€8.0m in 2019 but restated for the accounting impact of the BSA allocation, the adjusted net loss for 2020 was -€9.8m.

Despite a cash consumption of €5-10m per year over the last few years, thanks to the fundraising carried out via private placements with leading investors, the group's financial position remains healthy: cash and cash equivalents at €16.3m at end-December 2020 (zero net debt) and €39.8m at end-March 2021 (including the €28m fundraising, net debt estimated at -€24m)

iCRO

In the iCRO division, according to management, results and cash generation are now positive. In order to optimise the platform and support the growth of the business, the group should continue to invest in this division, which we do not expect to generate significant margins in the coming years. Once critical size is reached, any increase in activity should be accompanied by a significant increase in profitability to achieve a double-digit operating margin, as most successful CROs do.

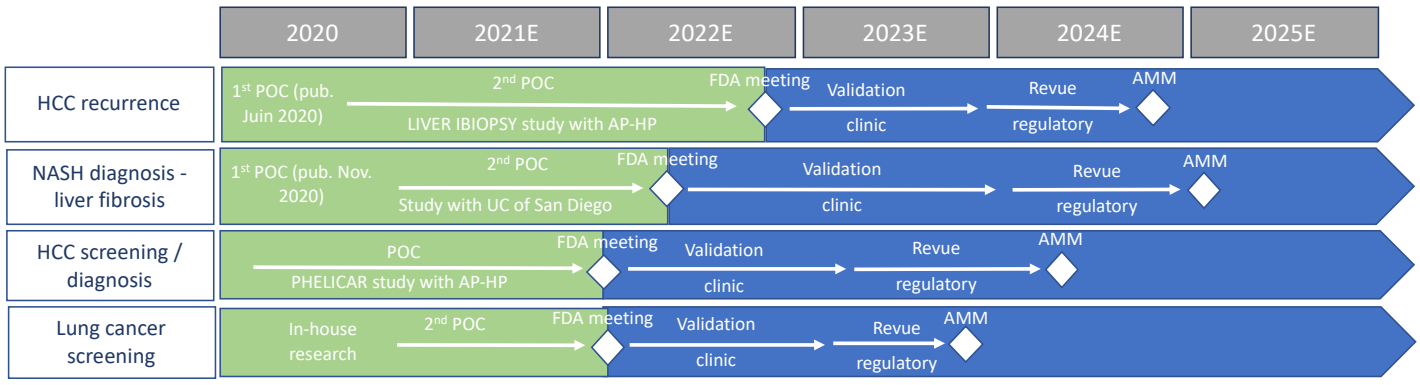
iBiopsy®

The group's research programs are focused on the development of analysis and diagnostic tools based on cross-referencing imaging with other patient data, which implies much lower research expenses than for drug research (no tolerance or toxicity research phase) or even other diagnostic tests (possibility of using historical databases).

After five years of research and development, for the research collaboration part and the platform access part, we estimate that operating expenses should remain limited, allowing us to reach breakeven quickly after the start of sales (by 2024 in our scenario), and to generate a double-digit operating margin (potentially higher than that of the iCRO activity given the additional value added by the iBiopsy® solutions equipped with innovative analysis tools)

For the screening-diagnosis segment, in view of the targeted clinical developments : lung cancer, HCC (recurrence and screening/diagnosis), NASH, and other clinical developments (immun-oncology and possible new indications) ; and the partnerships already announced (AP-HP in the field of HCC and University of San Diego in the field of NASH, availability of NIH data for lung cancer), we estimate that investments should probably increase from 2021 onwards, but especially significantly from 2022 onwards (no capitalization of R&D expenses, costs fully expensed), as a certain number of programs enter their clinical validation phase after proof of concept.

Clinical development plans



Source: Median Technologies

It should be noted that if the ambitions in the field of lung cancer screening were only communicated at the beginning of 2021, thanks to the progress already made and the availability of patient data (NIH database reprocessed to be integrated and processed by the iBiopsy® platform), this indication should most probably be the first product launched on the market by the company in the coming years, in a little less than 3 years according to the company's business plan.

Operating margin forecasts

From 2022 onwards, the company could thus conduct three to four clinical studies and/or regulatory reviews in parallel before obtaining marketing authorisations, which will increase operating expenses. Once the proof of concept is obtained, the first steps of clinical validation will necessarily involve the use of independent external service providers (legal obligation). Moreover, while the recent and future recruitments should enable the company to carry out its research programs from start to finish until the products are marketed, for the regulatory part, as is the practice, the company will use external consultants. Overall, we estimate the cost of the clinical validation and regulatory review stages at €10m per indication, i.e. €40m over the next five years for the targeted indications, plus developments for other indications (an estimated €2-3m per year). The amount will vary according to the size and specificity of the cohorts that will be integrated into the various stages of the clinical studies (not known at this time) and the cost of access to patient data. Overall, we estimate the expenses related to clinical research and the development of new indications at approximately €12m per year from 2022.

In the short-term, given the partnerships set up for the proof-of-concept phases in the CHC and NASH indications, the increase in research expenses should be more contained (€9m estimated for 2021). However, in 2021, the company should bear the full-year impact of the strengthening of its teams, which took place mainly in the second half of 2020 (141 employees at 31 December 2020, compared with 106 at 31 December 2019), and the effects of continued recruitment since the beginning of the year to prepare for the marketing phases of the products (marketing and regulatory functions, etc.). Operating expenses should thus increase significantly, which will only be partially offset by the expected results of the iCRO division and the expected contribution of the research programs and platform access segments (from 2025). Over the next two to three years, despite the ramp-up of iCRO, we expect operating losses to increase.

Overall, we estimate that operating losses will increase to -€10.1m in 2021 and -€11.5m in 2022. The losses will then be reduced from 2023 onwards.

Operating income forecast, by division

M€	2020	2021E	2022E	2023E	2024E
iCRO	**0,1**	**0,4**	**1,7**	**3,7**	**5,5**
% of sales	1,0%	2,0%	6,0%	10,0%	12,0%
iBiopsy®	**-8,7**	**-10,5**	**-13,2**	**-13,0**	**-12,2**
0/w Research & plateform access	-	-1,5	-1,2	-1,0	-0,2
0/w internal research & clinical studies	-	-9,0	-12,0	-12,0	-12,0
Total EBIT	**-8,8**	**-10,1**	**-11,5**	**-9,3**	**-6,7**

Source: Midcap

Forecast changes

In order to take into account the announcements made in the last few weeks: new indication in lung cancer, new hires, etc., but especially the fundraising completed at the end of March, which should allow the company to accelerate its internal research programs, we have to revise our earnings forecast scenario for Median Technologies, with an upward revision of the loss forecasts for the coming years.

Summary of forecast changes

M€	2020	2021E		2022E		2023E		2024E	
		Old	New	Old	New	Old	New	Old	New
Sales	13,5	20,2	20,2	29,3	29,3	39,4	39,4	49,5	49,5
Change	50,6%	49,6%	49,9%	45,1%	45,0%	34,8%	34,4%	25,6%	25,7%
Staff costs	-11,7	-17,7	-16,2	-23,4	-20,2	-29,3	-24,2	-36,4	-26,7
External charges	-9,5	-10,1	-12,7	-9,7	-19,2	-10,6	-23,0	-10,9	-27,8
Taxes & duties	-0,4	-0,6	-0,6	-0,6	-0,6	-0,6	-0,6	-0,7	-0,7
Other expenses & revenues	0,0	-0,1	-0,1	-0,1	-0,1	-0,1	-0,1	-0,2	-0,2
Depreciation & amortization	-0,7	-0,7	-0,7	-0,7	-0,7	-0,7	-0,7	-0,7	-0,7
EBIT	**-8,8**	**-9,1**	**-10,1**	**-5,2**	**-11,5**	**-1,9**	**-9,3**	**0,6**	**-6,7**
Financial result	-4,0	-0,4	-0,5	-0,9	-1,1	-1,3	-1,2	-1,3	-1,2
Net profit	**-12,8**	**-9,5**	**-10,6**	**-6,1**	**-12,6**	**-3,2**	**-10,5**	**-0,7**	**-7,9**
Net profit corrected*	**-9,8**	**-9,5**	**-10,6**	**-6,1**	**-12,6**	**-3,2**	**-10,5**	**-0,7**	**-7,9**

* Adjusted for the recognition of warrant allocations to the EIB in 2020 (non-cash impact)

Source: Midcap

This integration of the development programs conducted within the iBiopsy® platform also leads us to modify our valuation approach.

C. Cash generation/requirement forecasts

Since its creation, the company has attracted leading financial investors (European, Japanese, Chinese and American) and industrialists in the sector (Canon, Furiu). Since 2011, the year of the IPO by direct listing (at a price of €8.05), and until the end of 2020, the group has raised nearly €75m in capital increases without a public offering (between €12.61 and €4.05 per share, weighted average at €10.54).

Cash flow statement & financial structure

M€	2014	2015	2016	2017	2018	2019	2020
Cash flow	-4,3	-5,4	-7,7	-14,7	-15,3	-7,4	-8,0
Capex	0,0	-0,3	-0,5	-0,4	-0,3	-0,2	-0,4
Change in WCR	0,8	1,7	0,1	0,9	-0,4	2,9	2,5
FCF	**-3,5**	**-4,1**	**-8,0**	**-14,2**	**-15,9**	**-4,6**	**-5,8**
Disposals	0,1	0,0	0,0	0,0	0,3	0,1	0,1
Financial investments	0,0	-0,1	0,0	-0,1	-0,2	0,0	0,0
Dividends	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Others	0,0	0,0	0,0	0,0	0,0	0,0	-0,1
Available cash flow	**-3,4**	**-4,2**	**-8,1**	**-14,3**	**-15,7**	**-4,6**	**-5,9**
Change in debt	-0,8	-0,7	-1,0	-0,5	0,0	-0,5	14,6
Change in capital	17,8	19,5	20,6	1,3	0,2	0,0	0,0
Change in cash	**13,6**	**14,6**	**11,5**	**-13,5**	**-15,6**	**-5,1**	**8,7**
Net debt	-13,6	-28,8	-41,3	-28,3	-12,7	-6,5	-0,7
Shareholder's equity	12,0	26,2	38,7	24,9	9,1	1,3	-11,4

Source: Median Technologies

The last significant capital increase was carried out in 2016 (over €20m at a price of €13.0 per share from Furi Medical Science Company Luxembourg).

Note a structurally negative WCR (-€13.2m at the end of December 2020). In the iCRO business, when contracts are signed, the group receives a down payment of 20 to 30%, which is either deducted from invoices as they are received or reimbursed at the end of the contract. Any increase in

activity is thus accompanied by a cash resource for this division. As a result, at the end of December 2020, net debt stood at €0.7m and shareholders' equity at €11.4m.

Since the close of FY2020, as expected (negative equity at the end of 2020 and commitment to raise capital from the EIB), the group has carried out a new capital raising in the form of a private placement that closed in March 2021, enabling it to raise €28m at €11.45 per share, close to the stock market price at the time of the transaction.

In addition, the shareholders who participated in the 2014 fundraising (Celestial and IDInvest, whose stake is now below 5%) have warrants (944,442 at the end of 2020) that expire in 2021. With an exercise price of €9, we have estimated that these warrants would be converted (1:1) during the year leading to an additional fundraising of €8.5m, which we have included in our scenario for 2021 in addition to the fundraising completed in March.

With the drawdown of the EIB financing, we expect the group to pay interest of €0.7m net of estimated financial income per year (only 9 months in 2020). In our scenario, we have integrated the drawing of tranche 2 in 2022, and at this stage no drawing of tranche 3, leading to financial costs in excess of €1m. Net losses are thus expected to increase in 2021 and 2022, and to start reducing significantly from 2024 in our scenario.

Over the period, FCF should thus remain negative. However, thanks to the fundraising carried out last March, and our assumptions regarding the exercise of warrants and the possibility of drawing down tranches 2 and 3 of the EIB financing, the company has the means, in our opinion, to finance the development plans announced for the next 4 to 5 years.

Net income and cash generation forecasts

M€	2017	2018	2019	2020	2021E	2022E	2023E	2024E
EBIT	**-17,1**	**-15,4**	**-8,0**	**-8,8**	**-10,1**	**-11,5**	**-9,3**	**-6,7**
Extraordinary	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Financial result	-0,1	0,1	0,0	-4,0	-0,5	-1,1	-1,2	-1,2
Net profit	**-17,2**	**-15,3**	**-8,0**	**-12,8**	**-10,6**	**-12,6**	**-10,5**	**-7,9**
RNPG corrigé*	**-17,2**	**-15,3**	**-8,0**	**-9,8**	**-10,6**	**-12,6**	**-10,5**	**-7,9**
Cash flow	-14,7	-15,3	-7,4	-8,0	-9,9	-11,9	-9,8	-7,2
Capex	-0,4	-0,3	-0,2	-0,4	-0,4	-0,4	-0,4	-0,4
Change in WCR	0,9	-0,4	2,9	2,5	2,3	3,0	3,1	2,8
FCF	**-14,2**	**-15,9**	**-4,6**	**-5,8**	**-8,0**	**-9,3**	**-7,0**	**-4,7**
Disposals	0,0	0,3	0,1	0,1	0,0	0,0	0,0	0,0
Financial investments	-0,1	-0,2	0,0	0,0	0,0	0,0	0,0	0,0
Dividends	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Others	0,0	0,0	0,0	-0,1	0,0	0,0	0,0	0,0
Available cash flow	**-14,3**	**-15,7**	**-4,6**	**-5,9**	**-8,0**	**-9,3**	**-7,0**	**-4,7**
Change in debt	-0,5	0,0	-0,5	14,6	0,0	10,0	0,0	0,0
Change in capital	1,3	0,2	0,0	0,0	35,1	0,0	0,0	0,0
Change in cash	**-13,5**	**-15,6**	**-5,1**	**8,7**	**27,1**	**0,7**	**-7,0**	**-4,7**
Net debt	-28,3	-12,7	-6,5	-0,7	-27,8	-18,5	-11,5	-6,8
Shareholder's equity	24,9	9,1	1,3	-11,4	13,1	0,6	-9,9	-17,8

* Adjusted for the recognition of the allocation of warrants to the EIB in 2020 (non-cash impact)

Source: Midcap

v. Sum-of-the-parts Approach to the Valuation

At the end of 2020 there were a number of dilutive instruments:

- BSAs allowing the creation of 944,442 shares at a price of €9 under the 2014 BSAs (expiring in 2021, conversion integrated in our modelling), 120,000 shares at a price of €10.0 under the 2018 BSAs and 800,000 shares under the 2020 BEI BSAs at a price of €8.34 per share (not exercisable until April 2025)
- Stock options allowing the creation of 529,016 shares at an average price of €1.7 per share
- BSPCE allowing the creation of 4,000 shares at a price of € 6.5
- Free shares allowing the creation of 90,000 shares

In addition, at the end of 2020, the group had a tax loss carry-forward of €35m, which should enable it not to pay taxes for several years.

A. Valuation of the iCRO division

DCF

We based our modelling on the following assumptions:

- Strong revenue growth over the next 5 years (good visibility over 3 years thanks to an order book of more than €52.6m at the end of March 2021), followed by a gradual slowdown
- A double-digit operating margin at cruising speed: 15% in our scenario
- A working capital that remains negative (customer advances at the time of contract signature)
- A discount rate of 9.0% (success now proven, deployment in progress) and a growth of infinite cash flows at 1.5%

DCF Scenario

M€	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales	20,2	28,6	37,4	45,5	52,3	57,5	62,1	65,2	67,2	68,5
Change	49,9%	41,5%	30,7%	21,7%	15,0%	10,0%	8,0%	5,0%	3,0%	2,0%
Operating profit	**0,4**	**1,7**	**3,7**	**5,5**	**7,3**	**8,3**	**9,3**	**9,8**	**10,1**	**10,3**
Margin	2,0%	6,0%	10,0%	12,0%	14,0%	14,5%	15,0%	15,0%	15,0%	15,0%
(-) Taxes	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
NOPAT	**0,4**	**1,7**	**3,7**	**5,5**	**7,3**	**8,3**	**9,3**	**9,8**	**10,1**	**10,3**
(+) D&A	*0,3*	*0,3*	*0,3*	*0,4*	*0,3*	*0,2*	*0,2*	*0,2*	*0,2*	*0,2*
D&A of sales	1,5%	1,0%	0,8%	0,8%	0,5%	0,3%	0,3%	0,3%	0,3%	0,3%
ΔWCR	-2,1	3,2	2,5	2,3	2,3	1,9	1,9	1,3	0,8	0,5
Operating CF	**-1,4**	**5,2**	**6,6**	**8,1**	**9,9**	**10,4**	**11,4**	**11,2**	**11,1**	**11,0**
(-) CAPEX	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2
% CAPEX of sales	*0,9%*	*0,6%*	*0,5%*	*0,4%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*	*0,3%*
FCFF	**-1,6**	**5,0**	**6,4**	**7,9**	**9,7**	**10,2**	**11,2**	**11,1**	**10,9**	**10,8**
Discounted FCF	**-1,6**	**4,6**	**5,4**	**6,1**	**6,9**	**6,6**	**6,7**	**6,1**	**5,5**	**5,0**

Sum of FCF	51,3
Terminal value discounted	62,0
(+) Equity method	0,0
EV	**113,3**

Source: Midcap

Overall, our DCF valuation approach shows a valuation of €113m for the iCRO division alone (in enterprise value).

Sensitivity Table

	Infinite growth				
113,3	0,5%	1,0%	**1,5%**	2,0%	2,5%
7,0%	141,7	149,3	158,2	169,0	182,1
8,0%	121,1	126,3	132,2	139,2	147,4
9,0%	105,4	109,1	**113,3**	118,0	123,5
10,0%	93,1	95,8	98,8	102,2	106,1
11,0%	83,3	85,3	87,5	90,0	92,8

Source: Midcap

Stock Market Peers

We conducted our research with European or American CROs listed on a global scale. Our sample is thus composed of 8 companies.

Characteristics of the Peers' sample

Company	Price (€)	Market Cap (M€)	Sales 2020 (M€)	EBIT 2020 (M€)	EBIT/Sales 20
ICON	188,5	9 961	2 523	360	14,3%
IQVIA Holdings	193,0	36 998	10 306	791	7,7%
Syneos Health A	68,2	7 114	3 828	305	8,0%
Charles River Labs Intl	282,1	14 165	2 610	411	15,7%
PRA Health Sciences	141,9	9 195	2 861	260	9,1%
PPD	38,0	13 326	4 280	488	11,4%
Medpace Holdings	136,1	4 897	820	154	18,8%
Median Technologies	**11,9**	**173,8**	**13,5**	**-8,8**	**Na**

**Listing from 7 May 2021*

Sources Facset, Midcap

Given the maturity of Median Technologies' iCRO division (no significant positive earnings until 2022 in our scenario), multiples based on earnings are not very relevant. In our approach, we have retained only the sales multiples. The median of our sample is 3.1x 2021 sales.

Multiples of the sample of peers

Company	PE		EV/Sales		EV/EBITDA		EV/EBIT	
	2021	2022	2021	2022	2021	2022	2021	2022
ICON	26,7x	24,4x	3,2	2,8	18,5	16,5	21,0	18,6
IQVIA Holdings	27,3x	24,0x	4,1	3,8	18,7	16,9	23,2	21,0
Syneos Health A	19,2x	16,7x	2,1	1,9	14,4	12,4	16,0	13,9
Charles River Labs Intl	35,0x	30,9x	5,4	4,8	21,5	18,6	26,2	22,6
PRA Health Sciences	28,6x	25,4x	3,1	2,8	19,2	16,7	21,6	19,0
PPD	31,3x	27,0x	3,5	3,2	19,0	16,7	22,1	20,4
Medpace Holdings	37,7x	32,3x	4,9	4,1	26,1	20,8	29,3	23,0
Median	**28,6**	**25,4**	**3,5**	**3,2**	**19,0**	**16,7**	**22,1**	**20,4**

Sources: FactSet, Midcap

While our peers are significantly larger, they have less robust growth prospects. Moreover, the revenue generated by the group at the moment (€5.2m in Q1) does not really reflect the division's real size: order book at €52.6m at the end of March.

To better reflect the value of the technology developed by the group in its iCRO activity, it seems more relevant to us to apply the revenue multiple obtained at the level of the order book, resulting in a value of €186.6m, and to update it now (3 years order book) on the basis of the WACC retained for the DCF approach (9%). The value of the division using this method is thus €144m by stock market comparison.

Sector Transactions

The CRO and healthcare software services/editing market being buoyant segments, there are numerous merger/acquisition operations in the sector, to penetrate new clients, to complete a region, to acquire know-how or technology, etc. However, the multiples are often not made public, which limits the selected sample.

Transaction multiples

Target	Buyer	Year	EV	Sales	EV/Sales	EV/EBITDA
ActiveCare	Telcare	2018	17,6	6,4	2,8	Na
Advance Medical Health	Teladoc	2018	308,9	54,0	5,7	Ns
Albany Molecular Research	The Carlyle Groupe	2017	1 372,0	557,2	2,5	26,8
Analogic Corp.	Altaris Capital	2018	718,5	381,6	1,9	18,8
Aptuit LLC	Evotec	2017	255,4	88,0	2,9	Nc
Bioclinica	Cinven	2016	1 152,0	Nc	Nc	Nc
BioTelemetry	Koninklijke Philips	2020	2 106,8	93,4	4,1	16,9
Chilter International	Covance	2017	993,9	558,7	1,8	Nc
Cogentix Medical	Laborie Medical Tech.	2018	168,5	45,7	3,7	Ns
Dharmacon research	Horizon Discovery Group	2017	74,7	31,7	2,4	16,0
Electrical Geodesics	Philips Holding	2017	33,5	12,8	2,6	Na
Gatan	Ametek	2019	845,4	164,5	5,1	Nc
Genewiz	Brooks Automation	2018	381,8	70,5	5,4	Nc
IMS Health	Quintiles	2016	11 208,3	2 660,4	4,2	17,1
Kinapse	Syneos Health	2018	77,6	36,7	2,1	Nc
Medpass International	Icon	2020	39,4	10,7	3,7	Nc
Medidata solutions	Dassault systemes	2019	5 084,4	583,3	8,7	67,4
Parexel	Pamplona Capital	2017	4 404,4	2 172,6	2,0	14,7
The Advisory Board	Optuminsight	2017	2 231,4	668,4	3,3	Nc
Median					**3,1**	**17,1**

Source: Facset

The median transaction multiple is 3.1x revenue. Given the limited data in terms of earnings multiples, we cannot establish standard data at this level. Based on the order book announced at the end of March 2021 for the CRO division, discounted to today (WACC used for the DCF is 9%), the estimated enterprise value is thus €127m.

Summary of the valuation of iCRO

The average of our three valuation approaches results in an enterprise value of €128m for the iCRO division.

Average of our valuation approaches

M€	EV
DCF	113
Peers	144
Transaction multiples	127
Average	**128**

Source: Midcap

B. Valuation of the iBiopsy® platform

Research and platform access

While the newsflow related to iBiopsy® is rather promising (EIB financing, partnership with AH-HP and the University of San Diego, promising first results in the field of HCC, NASH and immuno-oncology), it is still difficult to give value to the technology in terms of a platform intended to participate in external research work or to be used directly by third parties.

Given the low level of revenue expected for the next two years, and especially the fact that profit generation is still far off, we have chosen to assign value to the research work and the provision of the developed solutions to third parties, using a DCF approach only.

We have based our modelling on the following assumptions:

- Strong sales growth in the first few years and a gradual slowdown in growth in subsequent years
- A double-digit operating margin at cruising speed: 25% in our scenario
- A working capital that remains negative (customer advances at the time of signing the contract)
- A discount rate of 12.0% and a perpetual growth rate of 1.5%

DCF Scenario

M€	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Sales	0,0	0,7	2,0	4,0	7,0	10,5	13,7	16,4	18,8	20,7
Change	*0,0%*	*NA*	*185,7%*	*100,0%*	*75,0%*	*50,0%*	*30,0%*	*20,0%*	*15,0%*	*10,0%*
Operating profit	**-1,5**	**-1,2**	**-1,0**	**-0,2**	**0,8**	**1,9**	**2,9**	**3,8**	**4,7**	**5,2**
Margin	-	-	-	-	*12,0%*	*18,0%*	*21,0%*	*23,0%*	*25,0%*	*25,0%*
(-) Taxes	0,0	0,0	0,0	0,1	-0,2	-0,5	-0,8	-1,1	-1,3	-1,5
NOPAT	**-1,5**	**-1,2**	**-1,0**	**-0,1**	**0,6**	**1,4**	**2,1**	**2,7**	**3,4**	**3,7**
(+) D&A	*0,4*	*0,4*	*0,4*	*0,4*	*0,3*	*0,2*	*0,2*	*0,2*	*0,2*	*0,2*
D&A of sales		50,9%	17,8%	8,9%	4,3%	1,9%	1,5%	1,2%	1,1%	1,0%
ΔWCR	0,0	0,4	0,6	0,8	1,1	1,4	1,2	1,1	1,0	0,8
Operating CF	**-1,1**	**-0,5**	**0,0**	**1,0**	**2,0**	**2,9**	**3,5**	**4,0**	**4,6**	**4,7**
(-) CAPEX	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2	-0,2
% CAPEX of sales		*25,6%*	*9,0%*	*4,5%*	*2,6%*	*1,7%*	*1,3%*	*1,1%*	*1,0%*	*0,9%*
FCFF	**-1,3**	**-0,6**	**-0,2**	**0,8**	**1,9**	**2,7**	**3,3**	**3,8**	**4,4**	**4,5**
Discounted FCF	**-1,3**	**-0,6**	**-0,2**	**0,6**	**1,2**	**1,6**	**1,7**	**1,7**	**1,8**	**1,6**

Sum of FCF	8,1
Terminal value discounted	14,0
(+) Equity method	0,0
EV	**22,1**

Source: Midcap

Overall, our valuation approach using the DCF method shows a valuation of just over €22m for the research and platform access parts (in enterprise value).

Sensitivity Table

		Infinite growth				
	22,1	0,5%	1,0%	**1,5%**	2,0%	2,5%
WACC	10,0%	27,7	28,9	30,1	31,5	33,1
	11,0%	23,9	24,7	25,7	26,7	27,9
	12,0%	20,8	21,4	**22,1**	22,9	23,8
	13,0%	18,2	18,7	19,3	19,9	20,5
	14,0%	16,1	16,5	16,9	17,4	17,9

Source: Midcap

It should be noted that if the initial results of the research conducted with iBiopsy® were to be confirmed, and on the basis of the first targeted indications alone, the revenues and results generated by the platform could be much more substantial than what we have included in our scenario at this stage.

Diagnostic Testing

While it is difficult to value diagnostic tests for which research and development work is underway (NASH, CHC, lung cancer, immunotherapy, etc.), certain companies operating in comparable universes can give indications of Median Technologies' potential in the event of success in one or more indications.

Indeed, some companies seeking non-invasive diagnostic solutions for pathologies that are not currently addressed or are poorly addressed have taken the step of going public on the U.S. market. These include:

- ⇒ Guardant Health: development of blood tests in the field of cancer regardless of the stage of the disease, which went public in October 2018, and is now capitalised at nearly $13.7bn ($287m in revenue and -$245m in 2020 EBIT).
- ⇒ Adaptive Biotech: research into new diagnostic tests in the field of cancer by detecting, measuring and tracking cancer cells in the blood during and after treatment, and research partnerships in the field of immunotherapy, listed since June 2019, and which has a capitalisation of more than $4.9bn ($98m in revenue and -$153m in 2020 EBIT).
- ⇒ Grail: research into the detection of early-stage cancers via blood sampling, was a candidate for an IPO before the health crisis occurred (the project was halted before the price range was disclosed). The company was aiming for an IPO in early 2020, which resulted in a fourth private placement in May 2020 ($390m raised), subscribed by historical shareholders such as Illumina, and thanks to the entry of new shareholders such as Public Sector Pension Investment and Canada Pension Plan Investment, bringing the amounts raised since its creation in 2016 to $1.9bn. In September 2020, a new IPO project was launched, but was halted by Illumina's announcement of its intention to acquire the 85.5% of Grail's capital that it does not hold. The offer is still in progress and values Grail at approximately $10.2bn (0 revenue, non-public 2020 results, -€253m 2019 EBIT).

To determine the company's upside, we analysed the potential for each of the targeted indications, for the most advanced ones: HCC, NASH and lung cancer. Indeed, in the field of immuno-oncology, even if the iBiopsy® platform has already obtained promising initial results (publication in September 2020), the company will probably have to rely on partnerships to pursue its developments, in particular to gain access to patient data and thus "train" the platform. At this stage, it is therefore a little early to determine the timing of the research phases in this indication.

For each of the selected indications, we have established a cash flow sequence. To do so, we determined a target population, an estimate of the market share at 3 years post-marketing approval (then stabilised growth at 3% per year), an estimate of the test price, an estimate of R&D costs during the clinical validation and regulatory phases, an estimate of operational costs once the marketing authorisation has been obtained (essentially a sales team retained at 3% of revenue), a tax rate once the historical losses have been compensated for at 33%, a discount rate of 15% and a perpetual growth rate of 1.5%.

It should be noted that we have retained a high gross margin for the tests developed (90%). Indeed, once the biomarker is revealed, the software tools developed can be deployed on a large scale and at a lower cost via the Cloud (costs limited to IT expenses such as servers, data hosting, etc.).

HCC

- Recurrence

Each year more than 500,000 people are diagnosed with HCC worldwide, for which it is difficult to predict the outcome. Considering an average liver biopsy cost of $2,000 to $7,000, we conservatively estimate the cost of the request to the platform at €1,500, and a market share of 10% of these new cases at 3 years. We obtain the following cash flow sequence:

Cash-flow indication summary for HCC recurrence

	2021	2022	2023	2024	2025	2026	2027	2028
# patients	**0**	**0**	**0**	**0**	**5 000**	**25 000**	**50 000**	**51 500**
Cost of diagnosis (€)	-	-	-	-	*1500*	*1500*	*1500*	*1500*
Revenue per year					7,5	37,5	75,0	77,3
GP					6,8	33,8	67,5	69,5
% of revenue					*90,0%*	*90,0%*	*90,0%*	*90,0%*
Operating costs					-0,2	-1,1	-2,3	-2,3
R&D costs	*-2,0*	-2,5	-3,0	-2,0	0,0	0,0	0,0	0,0
Taxes					0,0	-10,8	-21,5	-22,2
FCF	**-2,0**	**-2,5**	**-3,0**	**-2,0**	**6,5**	**21,9**	**43,7**	**45,0**
Discounted FCF	**-2,0**	**-2,2**	**-2,3**	**-1,3**	**3,7**	**10,9**	**18,9**	**16,9**
Terminal value	339							
Discounted terminal value	111							
Discounted FCF	43							
Wacc	15%							
Infinite growth	1,5%							
Estimated value (NPV)	**153**							

Source: Midcap

Based on our assumptions, the net present value of HCC recurrence prediction test amounts to €153m.

- Screening-Diagnosis

The earlier fibrosis is detected, the higher the survival rate. Detection of small lesions (between 1 and 2 cm), and their characterization, could allow the implementation of therapy for patients at a time when the cancer is still at a stage where the probability of recovery is still very strong. IBiopsy® via the Pheno iDx Liver solution could become a mass diagnosis through the screening of at-risk populations, estimated at 328 million people in the world, o/w 27 million people in the United States and Europe (Source: Company). The prevalence is indeed higher in Asian countries and in Africa. We estimate a market share of 1% in 3 years. The price of the test is estimated by the company to be $100 (or slightly less than €83 based on the current EUR-USD level). We obtain the following cash flow sequence:

Summary of cash-flow indication HCC screening

	2021	2022	2023	2024	2025	2026	2027	2028
# patients	**0**	**0**	**0**	**50 000**	**817 500**	**1 635 000**	**3 270 000**	**3 368 100**
Cost of diagnosis (€)	-	-	-	*83*	*83*	*83*	*83*	*83*
Revenue per year				4,1	67,6	135,1	270,2	278,4
GP				3,7	60,8	121,6	243,2	250,5
% of revenue				*90,0%*	*90,0%*	*90,0%*	*90,0%*	*90,0%*
Operating costs				-0,1	-2,0	-4,1	-8,1	-8,4
R&D costs	*-2,5*	-3,0	-4,0	-0,5	0,0	0,0	0,0	0,0
Taxes					0,0	-38,8	-77,6	-79,9
FCF	**-2,5**	**-3,0**	**-4,0**	**3,1**	**58,8**	**78,8**	**157,5**	**162,3**
Discounted FCF	**-2,5**	**-2,6**	**-3,0**	**2,0**	**33,6**	**39,2**	**68,1**	**61,0**
Terminal value	1 220							
Discounted terminal value	399							
Discounted FCF	196							
Wacc	15%							
Infinite growth	1,5%							
Estimated value (NPV)	**595**							

Source: Midcap

Based on our assumptions, the net present value of an early detection test for HCC amounts to €595m.

NASH

Diagnosing NASH early is keý because in its early stages (before stage III), the disease is reversible by lifestyle and diet changes. iBiopsy® via the Pheno iDx NASH solution could become a mass diagnosis, via screening of at-risk populations, estimated at 50 million people in the US and Europe (Source: Company). We estimate a market share of 5% in 3 years. The price of the test is estimated by the company to be $100 (or slightly less than €83 based on the current EUR-USD level). We obtain the following cash flow sequence:

Summary of cash flow indication NASH screening

M€	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
# patients	**0**	**0**	**0**	**0**	**625,000**	**1,250,000**	**2,500,000**	**2,575,000**
Cost of diagnosis (€)	-	-	-	-	*83*	*83*	*83*	*83*
Revenue per year					51.7	103.3	206.6	212.8
MB					46.5	93.0	186.0	191.5
% of revenue					*90.0%*	*90.0%*	*90.0%*	*90.0%*
operating costs					-1.5	-3.1	-6.2	-6.4
R&D costs	*-2.0*	-2.5	-3.0	-2.5	0.0	0.0	0.0	0.0
taxes					0.0	-29.7	-59.3	-61.1
FCF	**-2.0**	**-2.5**	**-3.0**	**-2.5**	**44.9**	**60.2**	**120.4**	**124.0**
Discounted FCF	**-2.0**	**-2.2**	**-2.3**	**-1.6**	**25.7**	**29.9**	**52.1**	**46.6**
Terminal value	933							
Discounted Terminal value	305							
Sum of discounted FCF	146							
Wacc	15%							
Infinite growth rate	1.5%							
Estimated Value (NPV)	**451**							

Source: Midcap

Based on our assumptions, the net present value of an early NASH test is €451m, for the European and US markets.

Lung Cancer

Studies have shown that early diagnosis of lung cancer increases the survival rate of patients. A screening campaign for at-risk populations is already underway in the United States (14.1 million people targeted), o/w criteria have been enlarged in March 2021. However, current diagnostic tests produce many false-positives. he improvement of technologies available to practitioners could accelerate the application of these screening tests to at-risk populations, in Europe for example (34 million people in Europe), and/or lead the United States to extend screening tests to entire age groups (107 million people in the 50-79 age group in the United States). iBiopsy® via the Pheno iDx LCS (Lung Cancer Screening) solution, by improving diagnostic accuracy (reduction of false positives), could become a mass diagnosis. We have retained a target population of 50 million people for Europe and the United States (implementation of screening tests in Europe and slight extension of the inclusion criteria for the United States). We estimate the market share at 3 years to be 5%. The price of the test is estimated by the company to be $100 (or slightly less than €83 based on the current EUR-USD level). We obtain the following cash flow sequence:

Summary of cash-flow indication lung cancer screening

	2021	2022	2023	2024	2025	2026	2027	2028
# patients	**0**	**0**	**100 000**	**625 000**	**1 250 000**	**2 500 000**	**2 575 000**	**2 652 250**
Cost of diagnosis (€)	-	-	*83*	*83*	*83*	*83*	*83*	*83*
Revenue per year			8,3	51,7	103,3	206,6	212,8	219,2
GP			7,4	46,5	93,0	186,0	191,5	197,3
% of revenue			*90,0%*	*90,0%*	*90,0%*	*90,0%*	*90,0%*	*90,0%*
Operating costs			-0,2	-1,5	-3,1	-6,2	-6,4	-6,6
R&D costs	*-3,0*	-3,0	-4,0	0,0	0,0	0,0	0,0	0,0
Taxes				-11,2	-29,7	-59,3	-61,1	-62,9
FCF	**-3,0**	**-3,0**	**3,2**	**44,9**	**89,9**	**120,4**	**124,0**	**127,8**
Discounted FCF	**-3,0**	**-2,6**	**2,4**	**29,5**	**51,4**	**59,9**	**53,6**	**48,0**
Terminal value	961							
Discounted terminal value	314							
Discounted FCF	239							
Wacc	15%							
Infinite growth	1,5%							
Estimated value (NPV)	**553**							

Source: Midcap

Based on our assumptions, the net present value of a lung cancer early detection test amounts to €553m, for the European and US markets.

C. Summary of Our Valuation & Market Rating

In our valuation approach, for the diagnostic part of iBiopsie®, we have retained a discount to the present value obtained for each indication to take into account the probability of realization of our assumptions. This discount varies according to the current progress of the R&D phases, the research agreements put in place (accessibility, quality and quantity of data available to feed the platform), and the receptivity of payers to the use of diagnostics (in particular for the screening part on target groups). We have thus retained the following discounts:

- 85% discount for diagnosis of recurrent HCC;
- 80% discount for early diagnosis of HCC;
- 80% discount for early diagnosis of NASH;
- 75% discount for early diagnosis of lung cancer.

As the development stages progress, our discount assumptions will probably be revised. Given the potential offered by the diagnostic solutions currently being developed within the iBiopsy® platform, despite the discounts applied, the total value of this division is, according to our assumptions, €370m. To this must be added the valuation of the research part and access to the platform and the valuation of the iCRO activity (the company's source of revenue today). Overall, the sum of the valuation obtained for each division gives a global enterprise value of €521m for the group, or a valuation of the equity capital at €548m.

At the end of 2020, the share capital was composed of 12.1 million shares. The capital increase carried out at the end of March led to the creation of just under 2.5 million shares. In addition, in our scenario, we have assumed the conversion of the 2014 BSAs (at €9 per share), i.e. the creation of a little less than 1 million additional shares, and an expected number of shares of more than 15.5 million at the end of 2021, and an expected net debt of -€27.8m, i.e. a value of €35.3 per share.

Based on the bonus shares, BSPCEs, BSAs (excluding BEI BSAs that cannot be exercised until 2025) and stock options granted at the end of 2020, we have included in our valuation approach the creation of 743,016 additional shares (potential fund raising of €2.1m). On a diluted basis, our valuation per share is thus €33.8, which is our target price, and offers significant potential: (+173%).

Summary of the valuation approach

M€	NPV	Discount	Value retained
HCC Recurrence	153	85%	23
HCC Diagnosis	595	80%	119
NASH	451	80%	90
Lung cancer	553	75%	138
Total iBiopsy® diagnosis			370,5
iCRO			128,0
Research iBiopsy® et plateform access			22,1
Total EV			**520,6**
(-) Net debt			-27,8
(-) Provisions			0,4
Equity valuation			**548,1**
Nb of shares (millions)			15,5
Share price value (€)			**35,3**
Capital raised			2,1
Nb of shares diluted (millions)			16,3
Share price value diluted (€)			**33,8**

** Uniquely HCC testing*

Source: Midcap

Over the past 18 months, the share prices have been driven by sustained newsflow (x6 since 1 January 2020): growth in iCRO activity (sales and backlog) which remains preserved despite the effects of the health crisis, EIB financing, research partnerships (AP-HP and University of San Diego), promising initial results for the iBiopsy® platform (advanced fibrosis, Nash and immuno-oncology, acceleration of research programs aimed at early detection of lung cancer, structuring of teams with a view to preparing the regulatory and marketing phases of the products (within 2 to 3 years)

With the €28m of fundraising completed in March, and the possibility of drawing down the second tranche of the EIB financing (an additional €10m), we believe that the company has the means to finance the targeted pipeline of projects, which should support the newsflow in the coming months: new research partnerships, results of the iBiopsy® research programs, confirmation of the acceleration in the iCRO division, etc. We are therefore convinced that the stock should continue its upward trend, thus reiterating our Buy rating.

VI. Annexes

A. The CRO market: a growing segment

As part of the research and development programs required to develop and market pharmaceutical products, industry and public research players commonly use service providers, called CROs (Contract Research Organisations), out of obligation (the need to conduct independent studies including imaging for certain therapeutic areas including oncology), to gain access to expertise in study design, certain technologies or fields of application, guarantees of data reliability, or the preservation of patients' rights and safety.

The CRO market was estimated at $38.4bn in 2018 (45% of which was in North America), and is expected to reach nearly $91bn by 2026, i.e., an average annual growth rate of more than 11% (source: fortunebusinessinsights). This growth will be driven by i) the growth of research programs and an increase in the average budgets of these programs (increase in the prevalence of chronic diseases, research related to cancer, Alzheimer's disease, etc.), ii) the greater use of the CRO market for research and development, and iii) the increase in the number of research projects.), ii) greater recourse to subcontracting on the part of principals and iii) the opening of new markets (China is the main growth driver today, with growth estimated at +20% per year from 2018 to 2025, Source: ReportLinker). The share of imaging in the CRO market for clinical trials is estimated at 6-10% (Source: Company).

The market is fairly fragmented, with over 1,100 CRO companies worldwide (Source: prnewswire). Behind the global players, there are a multitude of smaller players. The top 10 companies in the industry (IQVIA, Covance, LabCorp, Syneos, Charles River, Parexel, ICON, PRA, PPD and Wuxi AppTec) account for just over 50% of the market.

In the imaging segment, iCRO, the major players are Bioclinica (a U.S.-based company founded more than 30 years ago that has been involved in more than 4,000 clinical studies, which merged in April 2021 with ERT, a 50-year-old company specializing in data and data management for clinical studies), Calyx previous imaging division of Parexel (an American company created more than 35 years ago, 16,000 employees in about 100 countries around the world, whose imaging business housed within Calyx was split, in January 2021, with 25 years of experience Calyx has been involved in more than 25,000 clinical studies) and Icon (an Irish company created in 1990, and listed on Nasdaq : ICLR, which had nearly $2.8bn in total sales in 2020). But there are also a multitude of smaller players, such as Median Technologies.

In this buoyant market, in particular in clinical trials in oncology the most dynamic therapeutic area, the company has successfully launched its iCRO offering, with revenue of €13.5m in 2020 (+51%), mainly in North America (21% of 2020 revenue) and China (53% of 2020 revenue).

B. Diagnostic solutions currently available

Biopsy or puncture: Invasive examinations

To diagnose, measure, or follow the evolution of cancer or certain diseases, biopsy or puncture are the solutions used by practitioners in the follow-up of their patients or by researchers in clinical studies. These so-called invasive examinations have several disadvantages: they can be unpleasant or even painful, sometimes require local or general anaesthesia and hospitalisation, and have a certain number of side effects, even risks of accidents. It is therefore difficult to repeat them frequently, especially since they are expensive. Moreover, they only constitute a partial sampling of the information necessary to analyse the tumour or liver fibrosis, and therefore only give a fragmented view to practitioners. They are therefore associated with so-called non-invasive examinations: imaging tools and biological examinations.

Non-invasive examinations

- Biological examinations

Biological examinations are developed from fluids (blood, urine, plasma, saliva) to detect rare cells and biomarkers. Biomarkers can provide useful information for monitoring patients, particularly during treatment. The evolution of the levels (decrease / normalization of the biomarker when the treatment succeeds in eliminating the cancer cells) makes it possible to know relatively quickly if a given treatment is effective or not. In addition to liquid biopsy, the market is witnessing the emergence of several other non-invasive diagnostic technologies that exploit skin lesions, bronchial fluid and respiratory exhalation as samples to trace cancer signatures.

- Medical imaging

This category includes the means of acquisition and restitution of images of the human body based on various physical phenomena such as the absorption of X-rays, nuclear magnetic resonance, the reflection of ultrasound waves or radioactivity, sometimes combined with optical imaging techniques such as endoscopy. Medical imaging is today one of the main tools for diagnosing cancer and certain pathologies. It makes it possible to obtain images, more or less precise depending on the technique used, of internal organs and to visualize any tumours they may have. These images provide information on the location, size and evolutionary stage of tumour lesions. Beyond their diagnostic value, they are therefore very useful for the implementation of a therapeutic strategy.

The main imaging solutions are:

⇒ ultrasound: use of ultrasound and radiography: use of X-rays
⇒ CT scan or CAT scan: use of X-rays, but with much finer images than X-rays thanks to a series of images corresponding to as many sections of the organ studied, and the possibility of reconstructing a relatively precise 3D image
⇒ MRI or Magnetic Resonance Imaging, which is very useful for the examination of soft, water-rich organs such as the brain
⇒ PET-scan or Positron Emission Tomography, a dynamic imaging technique that allows the visualisation of organ functions
⇒ scintigraphy: visualisation of the activity of cells in certain organs

These technologies have revolutionized medicine thanks to the progress of computer science by allowing indirect visualisation of the anatomy, physiology or metabolism of the human body. Developed as a diagnostic test, they are also widely used in biomedical research to better understand the functioning of the body.

A Dynamic Market

The cancer diagnostics market was estimated at more than $97bn in 2018 (source: gminside) and is expected to grow at more than 8% per year from 2019 to 2025 driven by the rising number of cancer cases worldwide, increasing use of diagnostics (generalised for an age group in certain indications), expanded access (fast-growing emerging countries), and the multiplication of diagnostic solutions.

The imaging segment accounted for 65% of the market in 2018 (source: gminside). Hospitals are the main users, but the use of imaging by pharmaceutical companies in their cancer research is expected to grow robustly with an expected CAGR of 9.4% during 2019 to 2025 (source: gminside). Research is indeed focusing on new techniques to detect a specific disease in real time. Many industry players are thus collaborating with cancer research institutes to strengthen R&D, helping to develop new products. In addition, increasing investment in healthcare R&D by the government in emerging economies will drive the market growth in the coming years.

The combination of diagnostic solutions, the multiplicity of pathologies and the specificities of each individual lead to the collection of a large amount of data that needs to be managed and interpreted in order to diagnose, measure or follow the evolution of solid tumours. It is in this context that the company has developed since 2002 software tools for the collection, management and analysis of imaging data in the context of clinical studies (iSee® platform and associated services).

Based on standard imaging tools, thanks to the latest advances in data science, artificial intelligence and data/cloud computing, the group has launched research programs over the past five years via the iBiopsy® platform to develop new high-performance analysis tools for diagnosis (biomarkers derived from algorithms, etc.) by linking information from various sources (multimedia/multimodal information, imaging, clinical data, biology data, etc.) and thus respond to needs that are not yet met, as some cancers or pathologies are difficult to detect, particularly in their early stages, or difficult to measure (determination of the stage of the disease). Moreover, measuring a treatment's effectiveness that is in development (effect of molecules in test according to patient categories) or of certain immuno-oncology treatments (adapted to each patient) is still complex. The reduction of analysis times and the improvement of the quality of interpretations, up to predictive medicine, adapted to each patient (personalized medicine) are the objectives stated by the directors.

The first indications targeted by the research conducted via the iBiopsy® platform concern three major indications: NASH and HCC (liver diseases) and the identification of responder or non-responder patients in immuno-oncology, three fields where current solutions in terms of diagnosis, prognosis, or measurement of treatment efficacy are still very insufficient or even non-existent.

Following the promising results of the first research programs, the directors announced in early 2021 that they would target a new indication with the iBiopsy® platform, which this time addresses a broader field: lung cancer, and which aims to develop solutions for early detection of the disease, even very early.

C. Details of the issues in the targeted indications

In the field of lung cancer

With 2.2 million new cases diagnosed worldwide in 2020, including 1.4 million men and nearly 800 thousand women, lung cancer is the second most common cancer after breast cancer (2.3 million new cases in 2020). Asia accounted for 58.5% of cases diagnosed in 2020, Europe for 22.4% and North America for 12.1% (Source: gco.iarc.fr).

The leading cause of lung cancer is smoking. While the prevalence has tended to fall in men for several years (52 per 100,000 in France), it has risen sharply in women (18 per 100,000 in France): x3 over the last 20 years due to increased tobacco consumption (source: Ooreka). Some lung cancers are also of occupational origin due to exposure to certain substances such as asbestos, arsenic, tar, silica, etc.

Lung cancer is now the leading cause of cancer death in the world, accounting for 22% of cancer deaths (Source: who.int) with a 5-year survival rate of 18.6% (Source: lung.org). This low survival rate is mainly linked to the late detection of lung cancer, which occurs when a cure is no longer possible. Indeed, by the time patients experience the first symptoms, the disease is often already at a too advanced stage.

In recent years, several clinical trials have been carried out on very large cohorts of patients to determine the impact of early diagnosis of lung cancer on mortality from this disease. The results of these multicentre randomised trials have shown that a low-dose screening test by CT scan compared to an x-ray test can reduce lung cancer mortality by 20-26% in at-risk populations (US National Lung Screening Trial 2002-2004, conclusions reached after 6.5 years of follow-up), and that a low dose CT scan compared to no test reduced mortality by 26% for male patients, and from 39% to 61% for the

female subgroup (European Nelson study conducted in 2003 with multi-year follow-up, conclusions reached after 10 years of follow-up).

As a result of these studies, awareness of the importance of early detection of lung cancer has increased. In the United States, lung cancer screening using low-dose CT scans for at-risk populations has been included in the recommendations of the United States Preventive Services Task Force (USPSTF) and the procedure is reimbursed by CMS (Center for Medicare and Medicaid Services). The recommendations issued by the USPSTF in March 2014, also echoed by the American Society of Clinical Oncology (ASCO), call for the screening of:

- patients aged 55 to 74 years;
- patients who accumulate at least 30 pack-years (one pack a day for 30 years, or 2 packs a day for 15 years, or 3 packs a day for 10 years);
- patient who are still smokers or who have quit in the previous 15 years.

In March 2021, the USPSTF expanded its recommendations for lung cancer screening in the United States. Annual screening now begins at age 50, vs 55, and smoking intensity has been reduced to 30 to 20 packs per year.

The implementation of lung cancer screening programmes is currently under discussion in Europe. In France, the recently announced Cancer Plan 2021-2030 includes new measures for the early diagnosis of cancers with a poor prognosis (5-year survival rate of less than 20%), including lung cancer.

However, the question arises as to the current screening solutions and their performance in the field of lung cancer. There are invasive examinations such as fibroscopy/bronchoscopy (introduction of a thin tube through the airways into the bronchi to visualise a lesion and remove a small fragment using forceps, followed by analysis of the tissue under the microscope), thoracic puncture (when the lesion is located in a bronchus that is too small to be accessible by a fibroscope, the result is analysed under the microscope) or Mediastinoscopy (examination of the lymph nodes through a small incision above the sternum and biopsy). The result is examined under a microscope. Given the constraints associated with invasive examinations (pain and discomfort for patients, local or general anaesthesia, risk of incidents, patchy vision, etc.) and their cost, it is difficult to use them for preventive screening. They are therefore second-line tools.

There are several non-invasive tests for the detection of lung cancer: cytology (microscopic examination of sputum) or blood tests which sometimes allow the discovery of cancerous cells (studies based on genetics to improve the results of these methods are underway); chest X-ray: An irregular spot, haze or fluid in the pleura confirms the need for further examination, but this method does not allow access to certain areas, and detections are limited for early stages; and finally the low-dose chest CT scan or LDCT, which can observe even small lesions.

In trials for lung cancer screening the two modalities chosen were X-ray and low-dose CT. These two diagnostic methods were compared in the NLST study (conducted between 2002 and 2004 in the USA) which showed that lung cancer mortality was 20-26% lower with detection via low-dose CT than that observed in patients screened by radiography.

The thoracic scanner allows a more precise analysis of the lung structure and an earlier detection of lesions (emphysema, tumours). It also analyses the pleura, which can be the site of liquid effusions (pleurisy), air effusions (pneumothorax) or a particular cancer (mesothelioma). This is why this detection technique has been chosen by the US authorities in their detection programme. The Nelson study (conducted in the Netherlands and Belgium), which compared no screening with low-dose CT screening, showed that the risk of death from lung cancer in male participants was reduced by 26% in the screened group compared with the control group at 10 years' follow-up. In the smaller subgroup of women, the reduction was even greater, with the risk of death from lung cancer reduced by 39% to 61% after several years of follow-up.

However, this type of screening has not yet been systematised on a worldwide scale because of certain uncertainties. In fact, with the current state of available technology, the LDCT (low-dose chest CT) leads to overdiagnosis and follow-up of patients who should not have been diagnosed. In the US NLST study published in 2011, which included more than 53,000 subjects aged 55-74 years (cumulative smoking of at least 30 pack-years, active or stopped in the last 15 years), 24.1% of patients in the group who had a low-dose chest CT scan once a year for 3 years were found to be positive (non-calcified nodule of at least 4 mm). However, it turned out (6.5 years of patient follow-up) that only 0.8% of patients were true positives, i.e. 23.3% false positives (i.e. 97% false positives).

If we add to the cost of screening in certain populations the additional cost of following up so-called false-positive patients, the cost effectiveness of low-dose CT screening is less clear, which has so far held back most countries from implementing such a campaign, unlike what has been done for breast cancer for example. The reduction in the number of false-positives could be one of the triggers for a generalisation of screening worldwide, as is the case in the United States.

HCC

Hepatocellular carcinoma, or liver tumour, is a malignant tumour affecting the liver tissue. **This type of cancer accounts for over 90% of liver cancers**. It is relatively common worldwide (especially in Africa and Asia) where it is the **sixth most common cause of cancer and the third most common cause of cancer mortality**; it is less common in Western Europe and the USA but is on the increase (growth of obesity and diabetes). This cancer usually affects individuals aged 30-50 years and causes 660,000 deaths worldwide each year. About half of these deaths occur in China (Source: News-medical.net). It occurs in almost all cases in an abnormal liver, frequently with chronic disease, often at the stage of cirrhosis. The most frequent causes are infection with the hepatitis B virus, the hepatitis C virus, alcohol intoxication and NASH. HCC in healthy liver exists but is exceptional.

The earlier the tumour is detected the better the chances of survival, however in the early stages the disease is asymptomatic, which is why it is frequently discovered during the diagnosis or monitoring of chronic liver disease.

The particularity of HCC is that it is a so-called "hyper-vascular" tumour, i.e. it fills and empties rapidly with arterial blood. At an advanced stage, the tumour invades the large vessels of the liver by sending tumour "buds" into these veins, which obstruct and ascend the main digestive vascular axis.

The treatment of HCC is essential, otherwise it is almost always fatal. However, it must take into account the cause and severity of the underlying liver disease. It is the severity of the underlying liver disease and the extent of the cancer that will dictate the treatment options. Therapeutic options for HCC include liver transplantation, chemo embolization, radiofrequency, surgical resection and chemotherapy. Leading and second-line drug research programmes, immunotherapies and studies that combine several approaches are under development.

To diagnose the severity of the disease and thus determine the therapy to be adopted, several methods exist: ultrasound-guided cytological (cytopuncture) or histological (micro-needle biopsy) samples, known as invasive. However, there are limitations: i) average sensitivitý which may be linked to the accessibilitý of the lesion (reduced at the level of the dome of the liver) or to difficulties of interpretation, ii) the risk of swarming on the puncture's path, which is low, but which must be taken into account, especially if a liver transplant is envisaged, iii) the risk of haemorrhagic complication linked to the sampling itself. Furthermore, for small nodules, biopsy is very difficult, and it is therefore not possible to make a diagnosis. To date, the solution is to wait and see if the tumour evolves, with follow-up examinations every 3 months.

Non-invasive diagnostic tests have been developed. CT scans with contrast injection and helical acquisition, and MRI with contrast injection, are the most commonly used imaging techniques. These two examinations make it possible to search for a very specific aspect of HCC: arterial vascularisation (intermediate or advanced stage). CT and MRI can also be used to assess extension: size and location of lesions, vascular invasion.

Despite all these developments, unlike other solid tumours, for which the therapeutic decision is made according to the TNM classification (classification of cancers according to their anatomical extension), **there is no consensual prognostic classification for HCC.** Numerous classifications have been proposed (Okuda, BCLC, CLIP, GRETCH, TNM-AJCC, etc.) but studies comparing them have given conflicting results. A patient may be prescribed chemoembolisation when a drug treatment would have been better suited to his case.

Research programmes are underway to determine more appropriate diagnostic and monitoring solutions, to enable even earlier detection of the disease and to identify factors predictive of response to treatment in order to best define the optimal treatment sequences and combinations for each patient.

In the field of NASH disease

The term steatosis ("fatty liver" disease) is used when there is an abnormal accumulation of fats in the liver cells. This steatosis can become pathological when it is excessive and progressive, i.e. when there is an overload of fat, liver complications and when it is associated with inflammation of the liver: this is what is known as NASH (Non-Alcoholic AteatoHepatitis).

Linked to a diet with too much sugar and fat, NASH can lead to cirrhosis or liver cancer. It is a disease that is most often asymptomatic, but its prevalence is currently on the rise due to the dual global epidemic of type 2 diabetes and obesity. The difficulty is therefore to be able to detect NASH in the first instance, and to diagnose the stage of the disease in the second instance.

A study published in the Journal of Hepatology estimates the number of adults with NASH in the United States at 17.3 million in 2016, and projects an increase in this number to **27 million by 2030**. In 5 major European countries (France, Germany, Italy, Spain and the UK) the number of NASH patients is estimated at 12.6 million, with a large increase expected to reach 18.3 million by 2030 (Source: Estes, C. et al., Modelling the epidemic of non-alcoholic fatty liver disease demonstrates an exponential increase in burden of disease. Hepatology, 2018).

The detection of NASH requires a diagnosis of steatosis. Since there are no specific markers yet, people with risk factors (slightly elevated blood sugar with or without diabetes, high blood fat, mild to moderate overweight, high blood pressure, etc.) should first have a blood test with a liver examination, which will detect a potentially abnormal transaminase level. Secondly, certain causes must be eliminated, since an elevated transaminase level may be linked to the presence of viruses in the body (hepatitis B or hepatitis C), to rare diseases (drug-induced hepatitis, autoimmune hepatitis) or to over-consumption of alcohol. In a third step, the hepatologist will determine whether steatosis is present. To do this, an ultrasound scan is performed to assess the amount of fat in the liver (swelling if steatosis). **However, the sensitivity of this examination remains poor** for diagnosing benign steatosis or progressive steatosis with inflammation, hence NASH, which may be reversible in the early stages of the disease (fatal in the advanced stages, liver transplantation necessary).

Although research is underway, including some stage III clinical trials (Intercept's OCA, Glamed's Aramchol, Novartis' Emricasan, Gilead Science's Simtuzumab, etc.), **there is no specific treatment for NASH to date**. If the disease is diagnosed early enough, the simple fact of modifying one's lifestyle (eating less fat, less sugar, doing more physical activity, walking more) makes it possible to melt the fat in the liver and thus lower the transaminases, and thus a reduction in steatosis which becomes reversible. Determining the stage of the disease is therefore key to its management, as it allows the establishment of an appropriate monitoring protocol, prediction of its evolution and sometimes the indication of a treatment.

The reference examination to assess the stage of fibrosis is histological analysis (microscopic analysis of liver tissue and cells) after a sample has been taken during a liver biopsy. However, **this invasive procedure** can expose the patient to complications (pain, paralysis, vagal discomfort, etc.) and it is **difficult to repeat over time**. In addition, biopsy is a particularly expensive procedure and represents a **financial challenge for healthcare systems**, which could be a hindrance to the widespread diagnosis of NASH. For this reason, non-invasive fibrosis diagnostic solutions have been developed and are under development. In contrast to biopsy, these examinations have the advantage that they are not traumatic and can be repeated as often as necessary.

Elastometry (or Fibroscan), for example, is a probe that emits vibrations or ultrasounds (same technique as ultrasound) that will pass through the tissues and bounce off them to return to the same probe. Depending on the speed of the return of the echo, the device will measure the elasticity of the liver. Indeed, the more fibrosis there is in the liver, the harder the liver is. However, the thresholds that define the degree of fibrosis can vary according to several parameters such as the cause of the liver disease (different thresholds between viral hepatitis, alcoholic cirrhosis, biliary disease, etc.) or the inflammation in the liver (often reflected by high transaminases). In some patients, **the results obtained are aberrant**, **due to the difficulty of the measurement**. For some patients, finally, the measurement is impossible (presence of ascites, overweight, etc.). In most cases, this measurement will therefore be correlated with another non-invasive examination of fibrosis, such as blood markers. Other imaging methods are also used, such as MRI (Magnetic Resonance Elastography using an MRI and an abdominal belt) or the solutions developed by the company Perspectum (in clinical trial, MRI tools specific to liver fibrosis).

Blood tests (Fibrotest, Fibrometer, APRI score, FORNS, etc.) give indirect results on the level of fibrosis by combining several indicators. The disadvantage of these tests is that **the result is not instantaneous** and, in the case of diseases that alter certain blood parameters, **the results are difficult to interpret**.

As the existing tests, both invasive and non-invasive, are still very imperfect, research is underway to improve the analysis solutions. It is in this context that Median Technologies has launched its R&D programme.

In the field of immuno-oncology

Immunotherapy treatments in oncology, or immuno-oncology, enable the body's immune system to relearn how to identify and destroy cancer cells. The result of very active scientific and clinical research, immuno-oncology is revolutionising cancer treatment.

Immuno-oncology includes treatments that activate or strengthen the immune defence against the tumour. Its mechanism of action is different from other "classic" oncology treatments, such as chemotherapy and radiotherapy, which directly destroy cancer cells. The aim of immuno-oncology treatments is to make the cancer cells detectable again by the immune system. The immune system may be able to recognise them again as an "abnormal element" and naturally cause their destruction

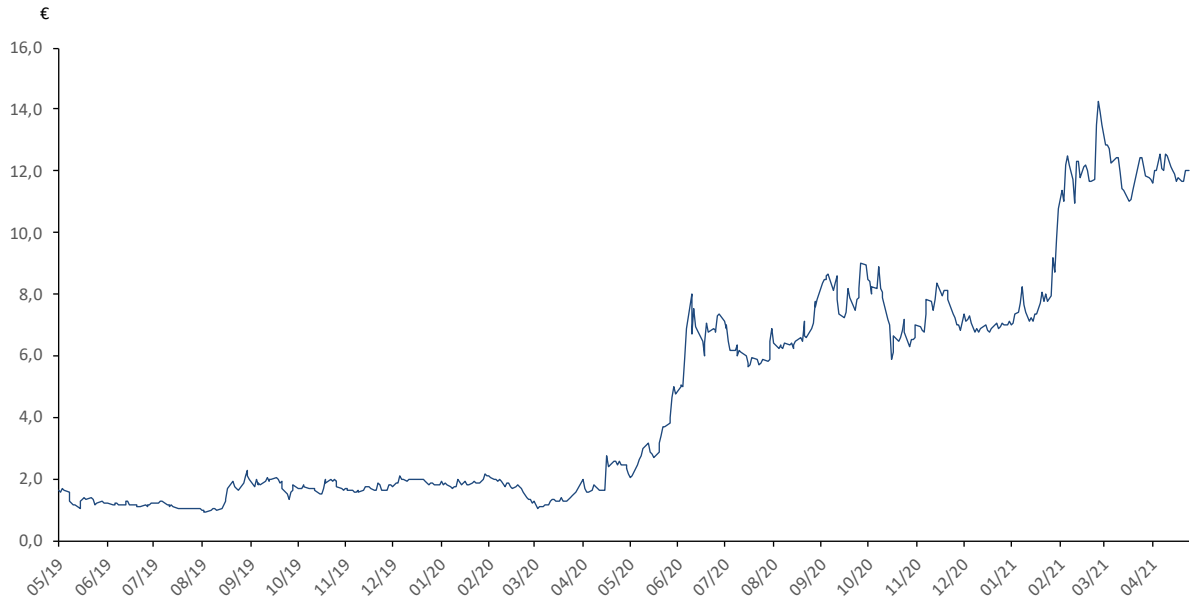
Immuno-oncology is currently proposed for the treatment of certain types of cancer. It is one of the possible treatment options and can be combined with other anti-cancer treatments. In practice, immuno-oncology consists mainly of the administration of therapeutic antibodies targeting key activating proteins of the immune system. They are prescribed on a case-by-case basis.

In recent years, immunotherapy has become very popular as an effective treatment for aggressive metastatic cancers. However, even if any proposed treatment is the one most likely to give the best results, its effectiveness cannot be predicted in advance, and despite undeniable progress, a large fraction of patients are resistant to these treatments, and their effectiveness is only found in 20 to 40% of patients treated (Source: Inserm).

The challenge is to identify as soon as possible whether patients are receptive to treatment, so as to be able to react quickly, or in the case of clinical studies to enable pharmaceutical companies to adapt the drugs (formulas, doses, etc.) and/or the study in progress.

VII. Market Data

share price trends (3 years)



STOCK MARKET DATA			
Daily average volume (thousands shares)		**Stock performance**	
3 month	91 788	**12 month higher**	14,6
6 month	81 014	**12 month lower**	2,04
1 year	82 401	**Perf YTD**	74%
3 years	78 514		

VIII. Financial Data

Income statement (M€)		2015	2016	2017	2018	2019	2020	2021e	2022e	2023e
Consolidated revenue		**3.9**	**6.4**	**7.7**	**6.3**	**9.0**	**13.5**	**20.2**	**29.3**	**39.4**
Trands		*152.1%*	*63.5%*	*21.0%*	*-17.5%*	*41.2%*	*50.6%*	*49.9%*	*45.0%*	*34.4%*
Gross margin		**3.8**	**6.2**	**7.5**	**6.2**	**8.8**	**13.3**	**19.9**	**28.9**	**38.9**
	% of revenue	*98.2%*	*98.3%*	*98.0%*	*97.9%*	*98.8%*	*99.0%*	*98.6%*	*98.7%*	*98.7%*
External costs		3.6	6.1	9.2	10.4	7.5	9.5	12.7	19.2	23.0
Staff		5.7	8.7	14.9	10.4	8.6	11.7	16.2	20.2	24.2
Other current income & expenses		0.1	0.3	0.3	0.4	0.4	0.5	0.8	0.9	1.0
EBITDA		**-5.6**	**-8.9**	**-16.8**	**-14.7**	**-7.4**	**-8.1**	**-9.4**	**-10.8**	**-8.6**
	% of revenue	*-144.1%*	*-139.6%*	*-218.1%*	*-231.5%*	*-83.1%*	*-60.1%*	*-46.5%*	*-36.7%*	*-21.8%*
Net depreciation and provisions		-0.1	-0.4	-0.3	-0.7	-0.5	-0.7	-0.7	-0.7	-0.7
EBIT		**-5.7**	**-9.3**	**-17.1**	**-15.4**	**-8.0**	**-8.8**	**-10.1**	**-11.5**	**-9.3**
	% of revenue	*-146.3%*	*-145.7%*	*-222.2%*	*-242.8%*	*-89.0%*	*-65.4%*	*-50.0%*	*-39.2%*	*-23.7%*
Equivalence relation		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill depreciation.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exceptional items		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial results		0.2	0.1	-0.1	0.1	0.0	-4.0	-0.5	-1.1	-1.2
Tax on profits		0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	SI rate	*0%*	*1%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Net result		-5.5	-9.1	-17.2	-15.3	-8.0	-12.8	-10.6	-12.6	-10.5
Minority interests		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Group net income		**-5.5**	**-9.1**	**-17.2**	**-15.3**	**-8.0**	**-12.8**	**-10.6**	**-12.6**	**-10.5**

Balance sheet (M€)	2015	2016	2017	2018	2019	2020	2021e	2022e	2023e
Tangible & intangible fixed assets	0.5	0.6	0.7	0.6	1.5	1.7	1.3	1.0	0.6
Financial assets	0.2	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Differed taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Current asset	2.6	3.9	4.7	4.5	6.6	7.0	9.4	12.0	14.0
Cash	30.3	41.8	28.3	12.7	7.6	16.3	43.5	44.2	37.2
Other assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Assets	**33.5**	**46.6**	**34.1**	**18.1**	**16.1**	**25.3**	**54.5**	**57.5**	**52.1**
Shareholders' equity	26.2	38.7	24.9	9.1	1.3	-11.4	13.1	0.6	-9.9
Minority intersts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Provisions	0.4	0.5	0.5	0.6	0.4	0.8	0.8	0.8	0.8
Financial debts	1.4	0.5	0.0	0.0	1.1	15.7	15.7	25.7	25.7
Current liabilities	5.5	6.9	8.7	8.5	13.4	20.2	24.9	30.5	35.6
Other liabilities									
Liabilities	**33.6**	**46.6**	**34.1**	**18.1**	**16.1**	**25.3**	**54.5**	**57.5**	**52.1**

Cash flow statement (M€)	2015	2016	2017	2018	2019	2020	2021e	2022e	2023e
Gross margins	-5.4	-7.7	-14.7	-15.3	-7.4	-8.0	-9.9	-11.9	-9.8
ΔBFR	1.7	0.1	0.9	-0.4	2.9	2.5	2.3	3.0	3.1
Cash flow from operations	**-3.8**	**-7.6**	**-13.8**	**-15.6**	**-4.5**	**-5.5**	**-7.6**	**-8.9**	**-6.7**
Acquisition of intangible & tangible assets	-0.3	-0.5	-0.4	-0.3	-0.2	-0.4	-0.4	-0.4	-0.4
FCF	**-4.1**	**-8.0**	**-14.2**	**-15.9**	**-4.6**	**-5.8**	**-8.0**	**-9.3**	**-7.0**
Disposal of tangible & intangible assets	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0
Acquisition of fixed assets & subsidiaries	-0.1	0.0	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0
Dividends received from MEE companies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Cash flow from investments	**-0.1**	**0.0**	**-0.1**	**0.2**	**0.1**	**0.0**	**0.0**	**0.0**	**1.0**
Change in loans	-0.7	-1.0	-0.5	0.0	-0.5	14.6	0.0	10.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capial raised	19.5	20.6	1.3	0.2	0.0	0.0	35.1	0.0	0.0
Cash flow from financing activities	**-0.7**	**-1.0**	**-0.5**	**0.0**	**-0.5**	**14.6**	**0.0**	**10.0**	**0.0**
Exchange rate changes and other	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
Change in cash flow over the year	**14.6**	**11.5**	**-13.5**	**-15.6**	**-5.1**	**8.7**	**27.1**	**0.7**	**-7.0**

Sources: Company, Midcap Partners

Financial Data

	2015	2016	2017	2018	2019	2020	2021e	2022e	2023e
Sales growth	152%	64%	21%	-18%	41%	51%	50%	45%	34%
Gross margin	98%	98%	98%	98%	99%	99%	99%	99%	99%
EBITDA margin	-144%	-140%	-218%	-231%	-83%	-60%	-46%	-37%	-22%
EBIT margin	-146%	-146%	-222%	-243%	-89%	-65%	-50%	-39%	-24%
Net margin	-142%	-143%	-224%	-241%	-89%	-95%	-53%	-43%	-27%
EPS	-0,55	-0,78	-1,44	-1,26	-0,66	-1,05	-0,68	-0,81	-0,67
EPS restated	-0,55	-0,78	-1,44	-1,26	-0,64	-0,91	-0,65	-0,78	-0,65
Dividend per share	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Dividend Yield	Na	Na	Na	Na	Na	Na	Na	Na	Na
WC as % of sales	-74%	-48%	-52%	-63%	-75%	-98%	-77%	-63%	-55%
DIO	Na	Na	Na	Na	Na	Na	Na	Na	Na
DSO	107	86	86	118	161	116	121	116	105
DPO	Na	Na	Na	Na	Na	Na	Na	Na	Na
FCF	-4,08	-8,05	-14,24	-15,90	-4,6	-5,8	-8,0	-9,3	-7,0
FCF yield	-4,4%	-7,8%	-10,5%	-20,6%	-25,2%	-9,2%	-4,3%	-4,6%	-3,5%
Conversion rate (FCF/EBITDA)	73%	91%	85%	108%	62%	72%	85%	86%	82%
CAPEX/Sales	Na	Na	Na	Na	Na	Na	Na	Na	Na
ROE	-21%	-24%	-69%	-168%	-623%	113%	-81%	-2263%	106%
ROA									
ROCE	258%	434%	594%	502%	164%	79%	73%	67%	45%
Gearing	-110%	-107%	-113%	-140%	-509%	6%	-212%	-3337%	116%
Leverage	0,0x	0,0x	1,7x	0,9x	0,9x	0,1x	3,0x	1,7x	1,3x
EV/CA	20,8	12,0	13,4	9,0	1,0	4,1x	8,8x	5,8x	4,5x
EV/EBITDA	-14,4	-8,6	-6,1	-3,9	-1,1	-6,8x	-19,0x	-15,7x	-20,6x
EV/EBIT	-14,2	-8,2	-6,0	-3,7	-1,1	-6,2x	-17,6x	-14,8x	-19,1x
PE (restated)	-18,4	-12,2	-8,0	-5,1	-2,3	-5,3x	-19,1x	-15,9x	-19,1x

Disclaimer

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1. DCF method: discounting of future cash flows generated by the company's operations. Cash flows are determined by the analyst's financial forecasts and models. The discount rate used corresponds to the weighted average cost of capital, which is defined as the weighted average cost of the company's debt and the theoretical cost of its equity as estimated by the analyst.
2. Comparable method: application of market valuation multiples or those observed in recent transactions. These multiples can be used as references and applied to the company's financial aggregates to deduce its valuation. The sample is selected by the analyst based on the characteristics of the company (size, growth, profitability, etc.). The analyst may also apply a premium/discount depending on his perception of the company's characteristics.
3. Assets and liabilities method: estimate of the value of equity capital based on revalued assets adjusted for the value of the debt.
4. Discounted dividend method: discounting of estimated future dividend flows. The discount rate used is generally the cost of capital.
5. Sum of the parts: this method consists of estimating the various activities of a company using the most appropriate valuation method for each of them, then realizing the sum of the parts.

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Company	Closing Price (€)	Rating	Warning
MEDIAN TECHNOLOGIES	12.4	BUY	D,F,G

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