

EPIC AGM – laser family story from startup to IPO

Seppo Orsila
30th March 2023



modulight



**WE
DO LASERS**
AND OPTICS
FOR PERSONALIZED
MEDICINE AND
BETTER LIFE

CONFIDENTIAL

We do laser and optics for a better life

modulight

Photoimmunotherapy combines photodynamic therapy and immunotherapy



Further application areas of laser-based treatments

Using laser light to detect different types of tissue and locate cancer cells

Utilizing cloud-based diagnostics data storage to improve therapeutic result in further treatment

Benefits of photoimmunotherapy

- ✓ Non-invasive and non-burdening treatment modality
- ✓ Treatment can be given numerous times
- ✓ Cost-effective especially compared to certain biological oncology drugs
- ✓ Able to access places which normal surgery or radiotherapy do not reach
- ✓ Great tool as a part of combinatory therapies as it does not prevent the use of other therapies
- ✓ Suitable for multiple indications and supporting several other drugs

History of Modulight

modulight

Strategy revision

GTM Strategy revision

Modulight founded

2000

Focus on US market, life sciences, large clients and cloud-linked products

2014

First cloud-based system in operation

2016

Modulight selected as Bausch + Lomb's exclusive supplier for Visudyne lasers

2018

Start EUR 23m investment program and fab expansion

2019

2020

2021

Starting new year with updated GTM strategy

2023

- Developing and pivoting technologies & medical application know-how
- Early technological achievements enabled penetration of many hard to get markets (e.g. world's first satellite with optical network)
- Commercial & operational development and fine-tuning

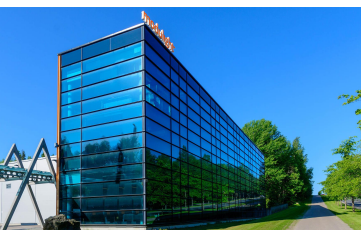
CE mark for configurable oncology laser platform

FDA approval for oncology laser

CE mark for ophthalmic laser

Modulight IPO listed to NASDAQ First North GM
First US patent for remote controlled platform device

FDA approval for ophthalmic laser



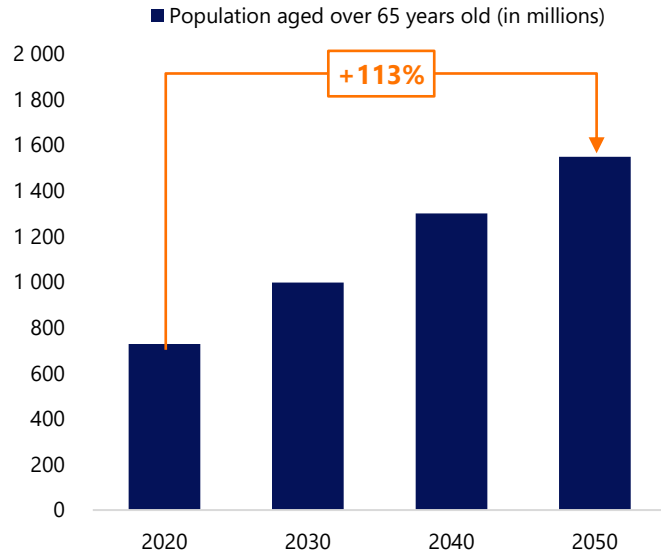


Aging population driving demand

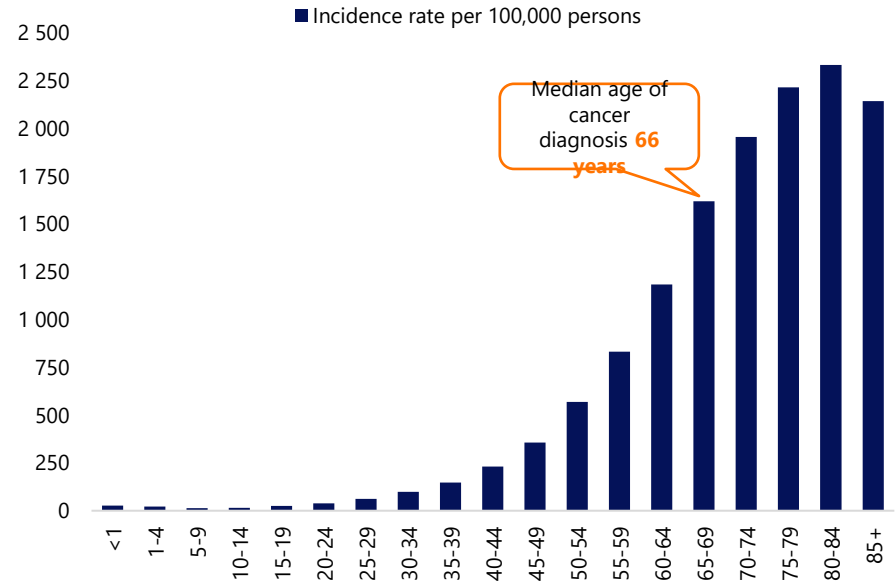
for better cancer treatment

modulight

Elderly population doubling in size during the next decades



Age is the biggest risk factor for cancer



1) Forecasted change globally between 2019 and 2050, source: UN, World Population Ageing 2019 report; 2) Overall cancer incidence rates by age at diagnosis, source: US National Cancer Institute, SEER 21 2013-2017

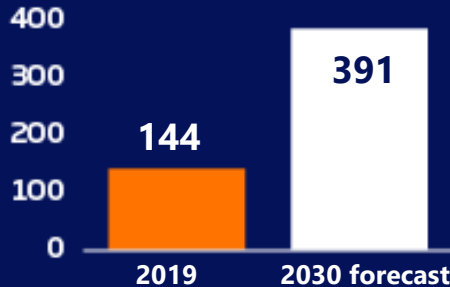
Significant business opportunities

offered by the pharmaceutical market, supported by synergistic business opportunities related to industrial applications

modulight

Oncology (cancer diseases)

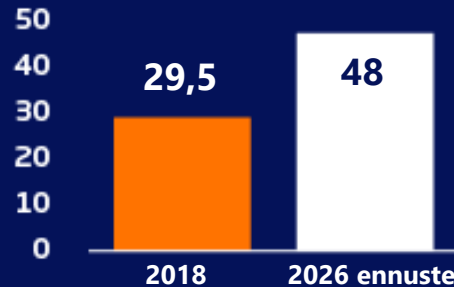
Market size billion. \$ ¹



Main growth factor: Aging population worldwide

Ophthalmological diseases

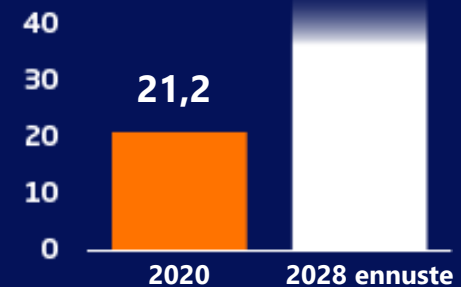
Market size billion \$ ²



Main growth factor: Continued increase in ophthalmic diseases with an aging population and increasing R&D investment

Genetics and Diagnostics

Market size billion \$ ³



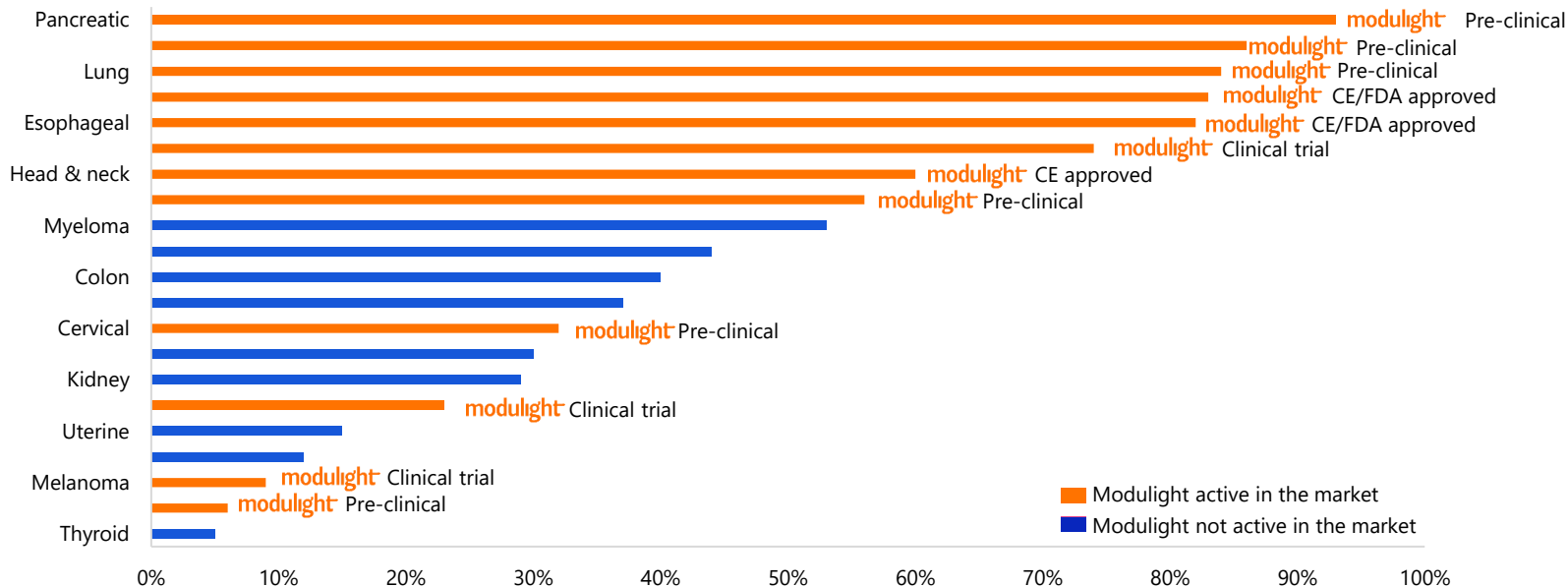
Main growth factor: The need for personalized drug treatments for cancer⁴

¹Frost & Sullivan, Global Oncology Drug Market, 2021 ²Fortune Business Insights: Global Ophthalmic Disease Therapeutics Market, 2019 ³Grand View Research: Next Generation Sequencing Market Size, Share and Trends Analysis Report, 2021 (Sekvensointimarkkina 4 miljardia dollaria, kasvuennuste 14,4 % yhdistettyä vuotuista kasvuvauhtia vuodet 2020–2028); Endoscopes Market Size, Share and Trends Analysis Report, 2021 (Endoskooppien markkina 10,8 miljardia dollaria vuonna 2020, kasvuennuste 8% yhdistettyä vuotuista kasvuvauhtia vuodet 2021–2028); Flow Cytometry Market Size, Share and Trends Analysis Report, 2021 (Virtausytometrian markkina 6,3 miljardia dollaria vuonna 2020, Kasvuennuste keskimäärin 8,9 % vuosittain 2021–2027). ⁴Spear BB, Heath-Chiozzi M, Huff J. Clinical application of pharmacogenetics. Trends Mol Med. 2001 May;7(5):201-4. doi: 10.1016/s1471-4914(01)01986-4. PMID: 11325631; PMC, Personalized Medicine at FDA: The Scope and Significance of Progress in 2020.

Significant potential in indications with high unmet need

modulight

McKinsey study shows high unmet need in several tumor types¹⁾



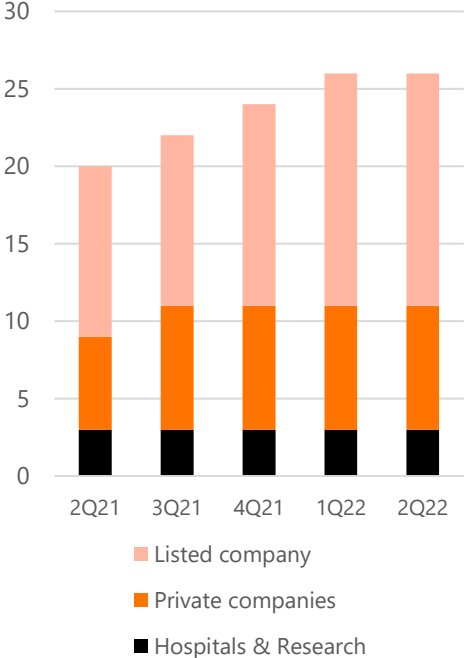
Modulight is targeting indications where the need for new treatment options is high

1) Unmet need defined as one- minus five-year survival rate in the United States
Source: McKinsey & Company (Delivering innovation: 2020 Oncology market outlook)

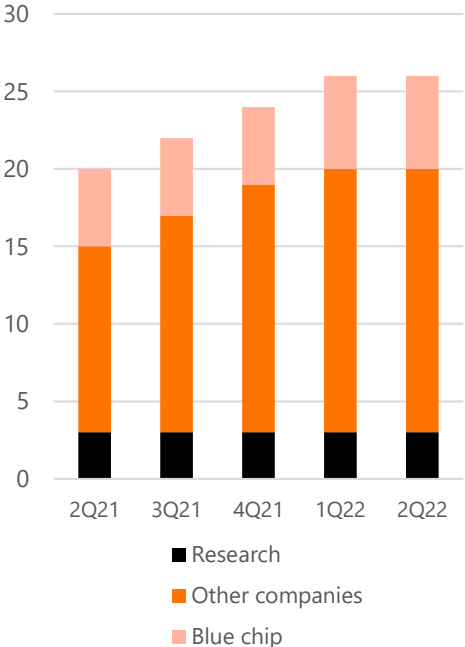
Solid R&D pipeline with leading companies



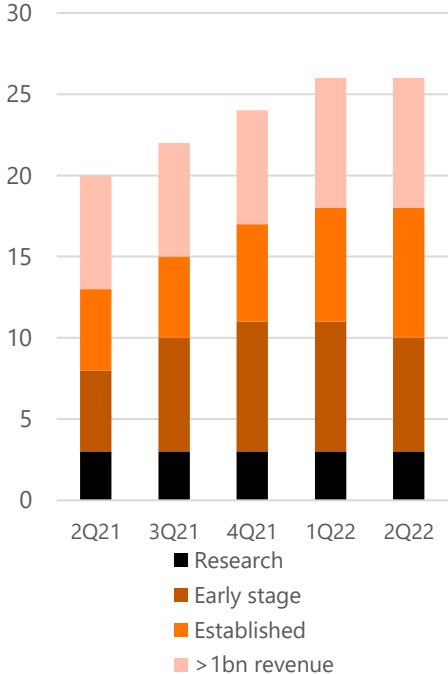
Ownership



Maturity

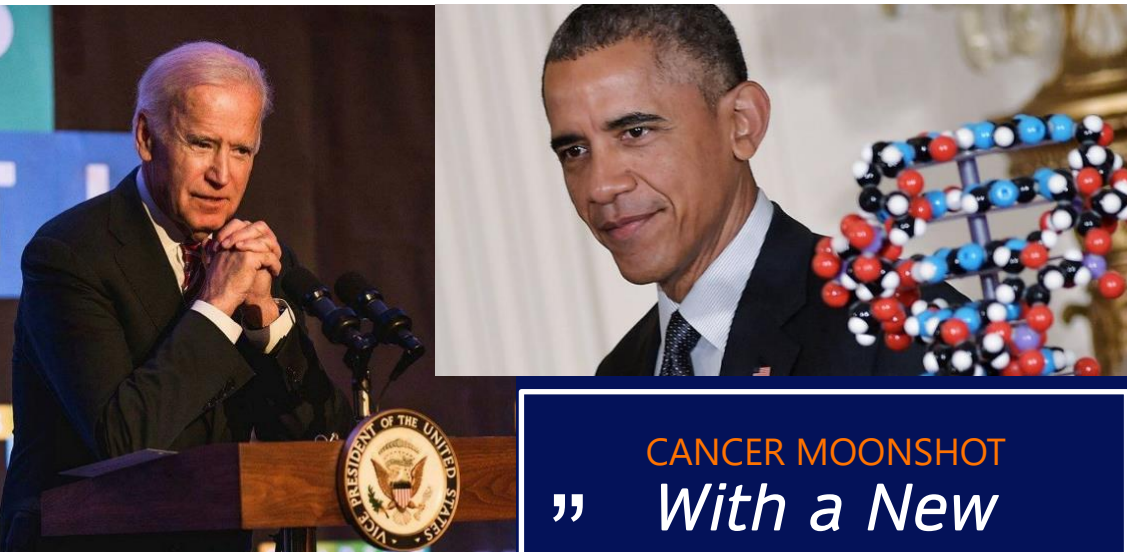


Size



Personalized medicine – it's what we do

modulight



CANCER MOONSHOT
” *With a New
Moonshot
We Can
Cure Cancer.*

Executive summary

- ❑ Personalized medicine (genetics, therapeutics & diagnostics)
- ❑ Almost guaranteed market with cancer becoming prevalent
- ❑ All medical professionals agree genetics and it's application is the next big thing
- ❑ Medical industry is poised for growth like nothing else (perhaps excluding travel)

The background of the image is a complex, futuristic scene. It features a large, curved metallic structure, possibly part of a machine or a large-scale experiment, with various components and lights. A prominent feature is a glowing blue network overlay consisting of interconnected nodes and lines, resembling a data network or a molecular structure. The overall color palette is dominated by blues, greys, and metallic tones, with some warmer colors like red and orange visible in the background.

Our focus is on providing comprehensive regulatory, lifecycle and field support from the initial start of the idea to the launch of the outcome

\$27M Investment 2019 - 2022



Hire new people
+20 new open positions



Increase equipment capacity
new equipment from epitaxy to final products assembly and testing



Space expansion
11,000 sq.ft increase to production space

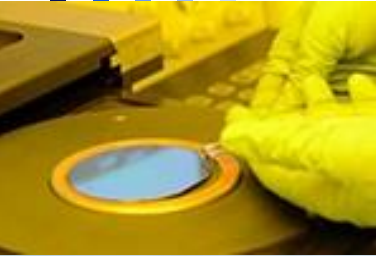


Increasing product demand
for applications like illumination, spectroscopy, remote sensing, LiDAR, PDT, digital printing

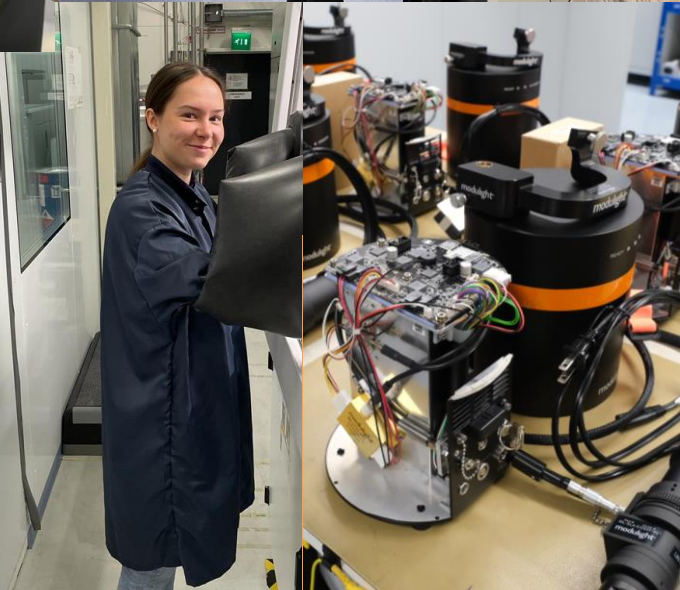
Investing to design & manufacturing capabilities

- ❑ Laser chip & structure
- ❑ Optics, electronics & software
- ❑ Mechanics & optical assembly
- ❑ Usability & regulatory
- ❑ Field service & lifecycle support

Total \$50m invested to own fab



- ❑ Investments starting to show operational benefits:
 - ❑ Further differentiation
 - ❑ Expanded offering
 - ❑ Increased productivity
 - ❑ Higher capacity
- ❑ Record number of CAPEX tool investments done in 2022 and continuing investments to high-end chip fab, optics manufacturing and fiber capabilities besides software & electronics



Modulight covers the entire value chain

modulight

DISCOVERY & INNOVATION



- Clinical grade lasers used for discovery and product innovation
- Use of in-vitro and in-vivo illumination devices in pre-clinical phase
- Data storage into same cloud as clinical device data
- Cooperation with leading early-stage medical researchers

PROTOTYPING



- Iterative prototyping process together with the customer
- Tailoring of the technological solution
- Optimized prototyping process reducing time to market

TESTING / VALIDATION



- Clinical trials for safety and efficacy
- Validation of business idea and product
- Product improvement
- Follow-up of clinical trials via cloud
- Extensive training and support for surgeons and other clinicians

PRODUCTIZATION



- Design for manufacturing
- Data collection
- Sell-out monitoring
- Efficacy improvement & product analytics
- Consumables supply & selling

PRODUCTION



- 360° production FDA grade partner with comprehensive services
- Regulatory support and FDA visits
- 3rd party customer audit support and vigilance reporting
- Sell-out reporting and customer intimacy analytics

LIFE CYCLE MANAGEMENT



- Post market support
- Vigilance reporting
- Warranty & service
- Pre-emptive maintenance & annual calibrations
- Online / cloud materials and user support
- Responsible recycling

Modulight covers the entire value chain offering customized lasers as well as supply and lifecycle security to customers as well as ability to develop & optimize the laser with application first approach



We at Modulight make lasers for various applications in the field of oncology –





Memorial Sloan Kettering
Cancer Center



Harvard
Medical School



Duke
UNIVERSITY



UNIVERSITY OF TEXAS
MD Anderson
Cancer Center



THE UNIVERSITY OF
CHICAGO
MEDICINE

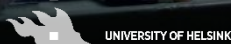
Baylor St. Luke's
Medical Center



rijksuniversiteit
 groningen

University / hospital collaboration

- ❑ We make user-friendly lasers for doctors, patients and hospitals
- ❑ Many pharma customers come to us through introduction from our existing customers



Tampere University





Summary

- ❑ Unique, patented product platforms & technology used in multiple cancer & ophthalmology therapies
- ❑ First FDA PMA in 2016 and cloud based device PMA 2023
- ❑ Customers are leading pharmaceutical, life science and technology companies
- ❑ Typically Modulight is trusted as sole source technology partner
- ❑ Wide, long expertise in lasers & medical solutions
- ❑ Best fab in the world - vertical integration with design & manufacturing in Tampere, FINLAND. Sales Palo Alto, CA. Service: New York, NY



Member of the
Modlight
Laser crew