Advanced Oncotherapy (AVO-GB)

Key talent acquisition reaffirms the promise of LIGHT

**KEY TAKEAWAY**

Advanced Oncotherapy ("AVO"), the developer of the LIGHT linear proton accelerator for the treatment of cancer patients, today announced the appointment of Moataz Karmalawy as Chief Commercial Officer. Joining from Varian Medical Systems, a major competitor, his appointment once again confirms the promise of AVO’s proton therapy proposition; demonstrating that the company has reached an inflection point and is well on its way to commercialisation. Overall, the addition of Mr Karmalawy further strengthens AVO’s robust management team which includes veterans of the PT industry from science, engineering, installation, application experience and compliance. We reiterate both our OUTPERFORM recommendation and our target price ("TP") of GBP 155.

**Commercialisation now within view**

The appointment of Mr Karmalawy as Chief Commercial Officer adds an experienced industry veteran to AVO’s management. With senior management experience at industry heavyweights Philips Healthcare and Varian Medical Systems, Mr Karmalawy brings on-board significant business operational experience which will be vital in securing a successful commercialisation roll-out for the LIGHT system. With the successful integration and subsequent testing of the LIGHT system at 52MeV in late 2018, the LIGHT project was significantly de risked with several further developmental milestones expected in 2019E. The company expects to reach therapeutically-relevant energy levels of 250MeV by YE2019. His appointment marks another promising step in AVO’s execution plan as the appointment of such a prominent hire indicates a paradigm shift from a focus on developing the platform to marketing and commercialisation.

**Proven success in the commercialisation of particle therapy systems**

Having joined Varian in 2007, Mr Karmalawy has been an integral part of the Varian particle therapy business for the last 12 years, overseeing the growth of the division. As General Manager, World Wide Particle Therapy Treatment, he has experience across all aspects of the particle therapy business including business development, supply chain management and M&A activities. Mr Karmalawy also brings a history of successful commercialisation exercises in America, which represents a key target market for AVO that has remained largely under penetrated.

**Top calibre management to drive commercial success**

AVO’s management team consists of high calibre industry veterans, from across science, engineering, installation, application experience and compliance. We feel that the successful industrialisation of LIGHT will be grounded in experience of top professionals like Prof. Stephen Myers, Ed Lee, Dr. Jonathan Farr and Dr Michel Baelen, supported by a team that has the right credentials to implement an attractive funding and execution strategy such as Dr. Mike Sinclair and Nicolas Serandour.

With the development timeline on schedule and first patients due to be treated in H2/2020E, we believe that AVO offers strong upside potential coinciding with successful early stage roll-out of the LIGHT system. We reiterate both our OUTPERFORM recommendation and our target price of GBp 155.
COMPANY DESCRIPTION

Advanced Oncotherapy plc, together with its subsidiaries, focuses on providing radiotherapy systems for cancer treatment through the use of a novel proton therapy technology to healthcare providers and hospitals. It is developing Linac Image Guided Hadron technology, a next generation of proton therapy system for treating cancer. The company was formerly known as CareCapital Group plc and changed its name to Advanced Oncotherapy plc in September 2012. Advanced Oncotherapy plc was incorporated in 2005 and is headquartered in London, the United Kingdom.

SCENARIOS

Base Case - GP Investment Case
Proton therapy penetrates the conventional radiation therapy market by 15% in 2030. AVO will be able to get a market share of around 15%. Price per treatment room will come down to $7.5m and accelerates sales growth.

Bluesky Scenario
Proton therapy penetrates at a faster pace and goes up to 30% or higher. AVO will maintain or increase market share in an oligopolistic market. Price per treatment rooms will be as high as $15m - scale effects improve margins.

Downside risk
Proton therapy penetrates at a slower pace and goes up to only 10% by 2030. AVO may have significant delays and its market share in PT remains low as a result (10%) in 2030. Competitors could develop a competing linac with a modular system.

Peer Group Analysis

SWOT

Strength - AVO has a promising modular system, which could be cheaper and faster installed in hospitals.
Weakness - The company is small in size, early stage and has a limited financial strength compared to its competitors IBA, Varian, Hitachi, etc.
Opportunity - Growing clinical evidence and patient driven demand could accelerate adoption rate more than expected.
Threat - Capital constraints on healthcare budgets and underwhelming evidence for PT could be replaced by carbon ion RT. Partnerships are instrumental for AVO’s success and there is a significant risk of terminations or delays.

INDUSTRY EXPECTATIONS

The industry is expected to benefit from a higher adoption rate for proton therapy fuelled by growing clinical evidence. Prices for treatment rooms are not that high when broken down on a per patient basis vs. modern drug therapy. Thus, prices for PT treatment rooms are expected to come down only moderately. Software and better of imaging is expected to improve beam delivery and help adoption rates.
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- (VARIAN MEDICAL SYSTEMS (VAR US))
- (PHILIPS MEDICAL SYSTEMS (PRIVATE COMPANY))
- Advanced Oncotherapy Plc (AVO-GB)
- Medical Technology (MT)

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