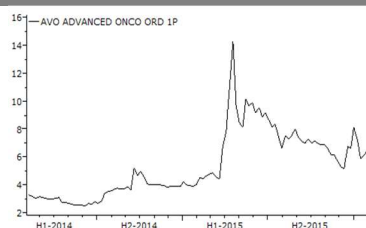


Healthcare Equipment & Services



Source: Fidessa

Market data

EPIC	AVO
Price (p)	7.25
12m High (p)	16.90
12 Low (p)	3.92
Shares (m)	1418.3
Mkt Cap (£m)	102.8
EV (£m)	95.2
Free Float* (%)	83
Market	AIM

*As defined by AIM Rule 26

Description

Developing next generation proton therapy systems for the use in radiation therapy of cancers. The first system is expected to be installed in Harley Street, London in 2016-17 and treating patients in 4Q 2017; to be operated through a joint venture company with CircleHealth.

Company information

4-7 Manchester Street
London
W1U 3AE

www.advancedoncotherapy.com

+44 (0)203 617 8728

Key shareholders

Directors	17.0%
Brahma AG	19.3%
Banca Profilo SPA	6.6%
Aviva Investors	5.7%
Hargreaves Lansd.	5.3%

Next event

Finals	Jun-16
AGM	Jun-16
Interims	Sep-16

Analysts

Martin Hall 020 7148 1433
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Advanced Oncotherapy

China – an emerging opportunity

Focused on delivering a more affordable, novel proton-based radiotherapy system, based on a technology originally developed and tested at the world renowned CERN facility in Switzerland. Commercial momentum is building, having recently secured a second purchase order in China, formed a JV with Circle to operate potentially the first proton therapy facility in the UK (Harley Street, London) and further expanded its order book which amounts potentially to \$480m. AVO's system has many attributes (affordability, modularity, versatility) that should appeal to the growing healthcare demands of China, amongst others.

- ▶ **China beckons:** AVO announced that it had received a purchase order for its LIGHT system from the China-Japan Union Hospital of Jilin University in October 2015, valued at \$75-80m. This represented the second purchase order in China. Additionally, the Company has four further framework agreements in place.
- ▶ **Addressable market:** China represents a significant opportunity with the capacity for at least 100 proton therapy centres. With only two currently operational and a further eight in the pipeline, AVO appears well placed within this significant emerging market, having already secured a 20% share of pipeline.
- ▶ **Valuation:** With two system sales, a potential order book of 12 systems (\$480m+) and the capacity to produce up to 30 systems p.a., operational momentum is building. We have not altered our forecasts. Timing of revenues from this purchase order is not yet clear.
- ▶ **Risks:** Delays to completing LIGHT installation in Harley Street in 2017 and first patient treatment in 4Q 2017 – both mitigated by partnership supplier network, and the small size relative to its principal competitors which impacts potentially on vendor financing capability as well as external perceptions.
- ▶ **Investment summary:** AVO is entering a market on the cusp of a steepening adoption curve, not least in China, with a PT solution that is unique with respect to its competitors and addresses the needs of all key stakeholders. The Company has sufficient cash to achieve its near term goal of first patient treatment in 2017 beyond which additional capital may be required.

Financial summary and valuation

Year end Dec (£'000)	2013	2014	2015E	2016E	2017E	2018E
Sales	69	106	80	35,484	80,645	137,097
Underlying EBITDA	-2,041	-5,063	-6,644	-4,522	3,547	19,871
Underlying PTP	-2,382	-5,059	-6,899	-4,624	3,389	19,620
Statutory PTP	-3,970	-7,563	-8,969	15,376	17,890	19,899
Underlying EPS (p)	-0.59	-0.60	-0.53	-0.36	0.26	1.38
Statutory EPS (p)	-0.99	-0.89	-0.69	1.19	1.37	1.40
Net (debt)/cash	-3,042	477	7,641	8,855	3,344	-4,701
Shares issued	2,437	10,158	21,063	0	0	0
P/E (x)	-12.2	-12.2	-13.6	-20.2	27.8	5.2
EV/sales (x)	1,536.2	962.2	1,189.9	2.6	1.2	0.8
EV/EBITDA (x)	-51.9	-20.2	-14.3	-20.8	28.0	5.4

Source: Hardman & Co Life Sciences Research

China – an emerging opportunity

Second LIGHT purchase order and second in China

Chinese order for proton therapy system

Advanced Oncotherapy announced on 21st October 2015, coinciding with the state visit of Chinese President Xi Jinping to the UK, that it had received a purchase order for its LIGHT machine from the China-Japan Union Hospital of Jilin University, located in Changchun, in Jilin Province. This came through its partnership with Sinophi Healthcare Limited and followed the announcement in August 2015 that Sinophi had entered into a Framework Agreement with China-Japan Union Hospital in relation to a proton therapy centre.

Second purchase order for LIGHT...

This was the second commercial sale of its LIGHT proton therapy system in China and follows the announcement in March 2015 that the Company's LIGHT system will be installed as part of Sinophi's oncology hospital project in Huai'an City, in Jiangsu province, East China.

...plus four additional Framework Agreements which are expected to use LIGHT technology

Sinophi also announced that further Framework Agreements have been entered in relation to providing proton therapy centres at an additional four hospitals in Beijing, Fuzhou, Luoyang and Nanjing, all of which are expected to use Advanced Oncotherapy's LIGHT technology.

The China-Japan Union Hospital is one of the largest hospitals in NE China with over 3,300 beds. The purchase order is worth between \$75-80m, subject to final configuration of the treatment rooms, and relates to a single LIGHT system to be installed at the heart of a five treatment room facility.

AVO in China

Two commercial sales and four framework agreements position AVO well within China

As referenced in our research report of 19th October 2015, Advanced Oncotherapy stands apart from its peers in that it sells a fully integrated turn-key system unlike its competitors, leaving the operator to source and integrate the other systems required (eg. treatment planning system, oncology information system, etc.), some of which are not designed to work together. We believe this, together with the unique features of the LIGHT system (the flexibility to offer multi-room facilities, the modularity to enable installation within existing facilities and/or hospitals with minimal disruption and lower operating costs than cyclotron-based systems), have been key to the decision making process.

LIGHT – Chinese penetration				
Client facility	City	Province	Treat Rooms	Cost (\$m)
Purchase orders				
China-Japan Union Hospital of Jilin University	Changchun	Jilin	5	75-80
Huai'an First People's Hospital	Huai'an	Jiangsu	3	40
Framework agreements				
Beijing Shijitan Hospital/Capital Medical University	Beijing		TBC	
Nanjing Drum Tower Hospital/Nanjing University School	Nanjing	Jiangsu	TBC	
Luoyang Central Hospital/Zhengzhou	Luoyang	Henan	TBC	
Fuzhou City Health Bureau	Fuzhou	Fujian	TBC	

Source: Advanced Oncotherapy, Sinophi Healthcare Limited

It is interesting to note from the two purchase orders that Advanced Oncotherapy has received that this flexibility is well illustrated. Huai'an Hospital has initially opted for 3 treatment rooms whereas China-Japan Union Hospital decided it had the capacity to install a 5 treatment room facility.

Cancer statistics in China

According to the latest data from the National Cancer Registry Center for 2011 there is a cancer incidence rate of c.250 per 100,000 of population and mortality rate of c.157 per 100,000 of population.

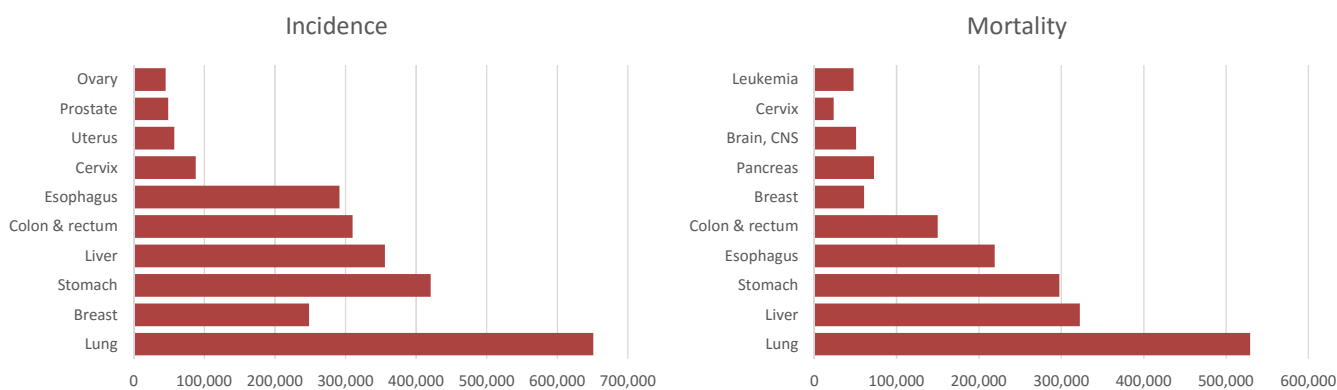
Around 3.4m diagnosed with cancer each year and 2m deaths

China – cancer incidence and mortality rates			
	per 100,000 of population		
	2011	2010	2009
Incidence	250	235	286
Mortality	157	149	181
Cancer patients			
Incidence	3,370,000	3,090,000	3,120,000
Mortality	2,110,000	1,960,000	2,700,000

Source: The National Cancer Registry Centre

The top 10 cancers in China in 2011, by incidence and mortality are depicted below.

Top 10 cancer incidence and mortality in China, 2011



Source: National Cancer Registry Center 2011

The table below outlines the key drivers as well as obstacles for adoption of proton therapy in China.

Proton Therapy in China – Drivers and Obstacles	
Drivers	Obstacles
Growing cancer prevalence	Installation costs
Growing use of radiation therapy	Rural population
Under penetrated	Clinical benefit yet to be fully elucidated
Technological innovation (imaging solutions, dose delivery, robotic positioning systems)	Reimbursement rates

Source: Hardman & Co Life Sciences Research

Insufficient radiation capacity to treat China's cancer population.....

... with 3,808 additional radiotherapy systems required by 2020

China's need

China is currently under-equipped to deal with the growing incidence of cancer with many patients often enduring protracted waiting times for radiotherapy. It is estimated that radiation therapy is required in 45% to 55% of newly diagnosed cancer cases. Currently only around 20% of cancer patients receive some form of radiotherapy in China. According to the IAEA¹ there are currently 1,040 radiotherapy centres in China with 1,014 accelerators (Linacs) providing X-ray (photon) radiotherapy. In a peer reviewed article² the authors suggest that China needs 3,808 additional radiotherapy systems by 2020. These can be either traditional radiotherapy Linacs or proton therapy systems.

¹ www-naweb.iaea.org/nahu/dirac/map.asp

² Datta et al 2014. International Journal of Radiation Oncology Biology Physics, 89-3, 448-457

China's decision tree can focus on proton therapy as well as X-ray Linacs

As China looks to address and build its healthcare infrastructural needs, there will most likely be a different decision making process compared with, for example, the US which is arguably adequately supplied with X-ray Linacs (currently 3,815 Linacs or ca.12 per 1m of population). Whereas the US healthcare system is evaluating the replacement cycle of Linacs and assessing whether a Linac should be replaced like-for-like or with a proton therapy system, China can assess whether its first purchase is a Linac or proton therapy system. Key factors in the decision process will be capital costs, operational costs, depreciation lives (Linac over 10 years versus proton therapy system over 25 years) and cost per fraction. AVO appears well positioned to address these questions. In addition, the recent announcements seem to suggest that China is willing to leapfrog its technology base.

AVO positioned to offer cost effective solutions

If one looks at Advanced Oncotherapy's purchase order from China-Japan Union Hospital, in which the LIGHT system will support 5 treatment rooms, this implies an average cost per treatment room of ca.\$15m which compares very favourably with the headline prices for compact single room systems that its competitors are charging, which typically represents the cost for the accelerator only; for example, IBA (€25-30m), Mevion (\$25m) and Varian (\$25m).

Proton Therapy in China

The table below provides an overview of the current status in China.

China – Proton therapy centres						
Client/Facility	City	Province	Supplier	System	Rooms	1 st patient
Operational *						
Shanghai Proton & Heavy Ion Center (SPHIC)	Shanghai		Siemens		3	2014
Wanjie Proton Therapy Center (WPTC)	Zibo	Shangdong	IBA	ProteusPLUS	3	2004
Under construction *						
Beijing Proton Centre	Beijing		IBA	ProteusPLUS	4	2018
Rui Jin Hospital, Jiao Tong University	Shanghai		In house development		3	2018?
Planning *						
Hong Kong Sanatorium and Hospital PTC	Hong Kong		SHI		2	2019
Tianjin Taishan Cancer Hospital	Tianjin		ProNova	SC360	3	2018
Yet to commence construction/planning						
China-Japan Union Hospital of Jilin University	Changchun	Jilin	AVO	LIGHT	5	?
Huai'an First People's Hospital	Huai'an	Jiangsu	AVO	LIGHT	3	?
Zhuozhou Jian Kang Qiao Investment Company	Zhuochou City	Hebei	IBA	ProteusPLUS	5	?
Heng Jian	Guangzhou	Guangdong	IBA	ProteusPLUS	2	?
Total Systems/Treatment rooms				10	33	
Framework agreement						
Beijing Shijitan Hospital/Capital Medical University	Beijing		AVO	LIGHT	n/a	?
Nanjing Drum Tower Hospital/Nanjing University Medical School	Nanjing	Jiangsu	AVO	LIGHT	n/a	?
Luoyang Central Hospital/Zhengzhou University	Luoyang	Henan	AVO	LIGHT	n/a	?
Fuzhou City Health Bureau in Fuzhou	Fuzhou	Fujian	AVO	LIGHT	n/a	?

Source: * Particle Therapy Co-operative Group, Hardman & Co Life Sciences Research

2 proton therapy centres with 8 further orders in the past year

According to the Particle Therapy Co-operative Group (PTCOG), there are currently two operational proton therapy centres in China, Wanjie Proton Therapy Center (WPTC), which started in 2004 and had treated 1,078 patients up to December 2014, and Shanghai Proton and Heavy Ion Center (SPHIC) which commenced operations in late 2014. However, the momentum has shifted over the past 12 months, with 7 purchase orders having been announced, supporting 24 additional treatment rooms. Of these 7 orders, Advanced Oncotherapy has secured 2 systems supporting 8 treatment rooms (33% of incremental capacity), with a four further systems being assessed under framework agreements with hospitals in Beijing, Nanjing, Luoyang and Fuzhou. The 8th system under construction is the in-house development program at Jiao Tong University.

Up to 1.7m patients require radiotherapy...

... implying around 170,000 might benefit from proton therapy

.....requiring an installed proton therapy base of over 100 systems

Addressable market

If one assumes that 50% of cancer patients should receive some form of radiotherapy, it implies a market opportunity in China of ca.1.7m patients. Currently, it is estimated that ca.1% of radiotherapy-eligible patients receive proton therapy in those markets where there is access to proton therapy (typically radiosensitive tumours, paediatric and central nervous system tumours), although it is believed by many that proton therapy could be applicable in up to 20% of tumours³. Some experts believe it should be well in excess of 20%, assuming the price of proton therapy comes down.

The table below looks at the potential opportunity in China. If, for example, one assumes that 10% of the radiotherapy market should receive proton therapy, it implies 168,500 patients would benefit from proton therapy. Assuming that ca.500 patients per annum can be treated per treatment room implies that there is a need for 306 additional treatment rooms beyond the current capacity (31 in operation, construction, planning and/or purchase orders). This translates into the need for an additional 102 proton therapy systems. Clearly, should proton therapy be used in 15-20% of radiotherapy treatments, the number of additional proton therapy systems could be as high as 158-214.

Incidentally, there are over 160 cities in China with a population in excess of 1m, suggestive of the need and potential demand for such infrastructural investment.

China – addressable market

	Patients			
Cancer incidence				3,370,000
Potential for radiotherapy	50%			1,685,000
Potential for proton therapy (%)	5%	10%	15%	20%
Potential number of patients	84,250	168,500	252,750	337,000
Assumed patients per treatment room	500	500	500	500
Implied number of treatment rooms	169	337	506	674
Current treatment rooms	31	31	31	31
Delta with current position	138	306	475	643
Implied number of proton systems assuming 3 rooms per system	46	102	158	214
Potential market size at \$50m per system	2,292	5,100	7,908	10,717

Source: Hardman & Co Life Sciences Research, The National Cancer Registry Centre, 2011

Commercial momentum increasing – 2 purchase orders; 1 pending vendor financing

From a commercial standpoint Advanced Oncotherapy has seen a positive change in momentum during 2015 with its first commercial sale (\$40m) to Sinophi Healthcare in March, a second commercial sale (\$75-80m) to Sinophi Healthcare in October and the announcement of a joint venture agreement with CircleHealth, owned by Circle Holdings plc, to operate the Company's proton therapy centre in Harley Street, Central London. Vendor financing proposals from a number of international financial institutions for the purchase of the LIGHT system are currently being assessed which is expected to lead to the third commercial sale. Additionally, the Company has a pipeline of interest amounting to at least 12 systems with at a minimum of 20 treatment rooms, amounting to an order book of at least \$480m.

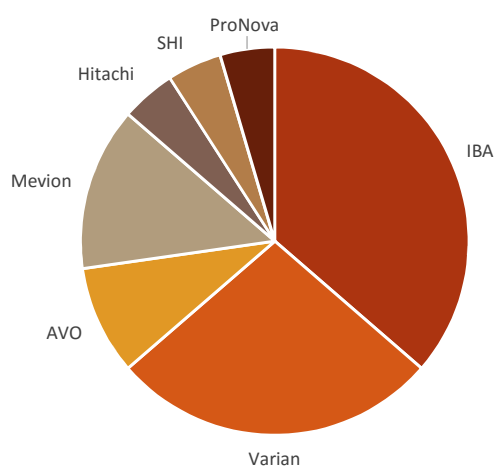
³ Health Council of Netherlands
www.gezondheidsraad.nl/sites/default/files/proton_radiotherapy200917E_0.pdf

Advanced Oncotherapy

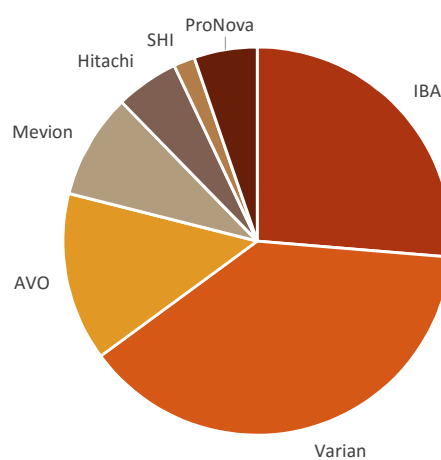
Advanced Oncotherapy - Commercial pipeline						
Location	Name	Date	Status	Sites	Rms	Comment
Beijing, China	Sinophi Healthcare	Oct-15	Framework Agreement	1	TBD	Expected to use Advanced Oncotherapy's LIGHT technology
Nanjing, China	Sinophi Healthcare	Oct-15	Framework Agreement	1	TBD	Expected to use Advanced Oncotherapy's LIGHT technology
Luoyang, China	Sinophi Healthcare	Oct-15	Framework Agreement	1	TBD	Expected to use Advanced Oncotherapy's LIGHT technology
Fuzhou, China	Sinophi Healthcare	Oct-15	Framework Agreement	1	TBD	Expected to use Advanced Oncotherapy's LIGHT technology
Birmingham, UK	Circle Holdings	Oct-15	Letter of Intent	1	3	Intention to operate a similar facility to that being developed in Harley Street, London
Changchun, China	Sinophi Healthcare	Oct-15	Commercial Sale	1	5	Second purchase order announced on 21 October for \$75-80m, depending on final specification
Huai'an, China	Sinophi Healthcare	Mar-15	Commercial Sale	1	3	First sale of LIGHT system for ca. US\$40m. Payment will be satisfied through milestone payments, to support working capital requirements and linked in part to the installation of LIGHT in Harley Street
London, UK	London Harley Street Proton Centre	Jan15-Oct-15	Lease to install	1	2	Housing the first LIGHT machine to be constructed and operated by joint venture with CircleHealth in 2017. Vendor financing being assessed for purchase of LIGHT system
Syracuse, USA	SUNY Upstate Medical University Hospital	Dec-14		1	3	Agreement to exclusively work with AVO to install the first LIGHT system in Syracuse, Central New York State. Extends the collaboration previously announced on 20 May 2014 (Letter of Intent)
UK, various	Spire Healthcare	Aug-13	Letter of Intent	3	TBD	Provision of three LIGHT systems. Spire operates 39 hospitals and 11 clinics in the UK
UK, various	BMI Healthcare	Jun-13	Letter of Intent	3	9	Focused on developing three sites, each with 3 treatment rooms, in Birmingham, Manchester & Glasgow. BMI is UK's largest independent hospital provider

Source: Hardman & Co Life Sciences Research

Global Proton therapy system sales and treatment rooms, 2015



Proton therapy systems



Proton therapy rooms

Source: Hardman & Co Life Sciences Research

The table below provides a review of the proton therapy systems sold globally in 2015 year to date. In total 22 systems have been sold which will support a total of 57 treatment rooms. Of these Advanced Oncotherapy has secured 9% of the systems sold and 14% of the treatment room capacity.

Proton therapy purchase orders – 2015 YTD

Client/facility	City	Country	Supplier	System	Rm	Date	Pricing
Tomorrow Medical Solutions		Taiwan	IBA	ProteusONE	1	21-Dec	€30-35m
Beverly Hospital	Los Angeles	USA	Mevion	S250mx	3	9-Nov	n/a
China-Japan Union Hospital of Jilin	Changchun	China	AVO	LIGHT	5	21-Oct	\$75-80m
Ackerman Cancer Center	Jacksonville	USA	Mevion	S250	1	14-Oct	n/a
Centre Hospitalier Universitaire	Lausanne	Switz.	Mevion	S250	1	8-Oct	n/a
Instituto de Oncologia Angel Roffo Hos.	Buenos Aires	Arg.	IBA	ProteusPLUS	1	21-Sep	n/a
UCLH	London	UK	Varian	ProBeam	3	27-Jul	£40m*
Christies	Manchester	UK	Varian	ProBeam	3	27-Jul	£40m*
NYPCC	New York	USA	Varian	ProBeam	4	21-Jul	\$80m*
Proton Partners International	Cardiff	UK	IBA	ProteusONE	1	25-Jun	€35-40m*
Proton Partners International	London	UK	IBA	ProteusONE	1	25-Jun	€35-40m*
Proton Partners International	Newcastle	UK	IBA	ProteusONE	1	25-Jun	€35-40m*
Sibley (John Hopkins)	Washington	USA	Hitachi	PROBEAT	3	11-Jun	n/a
Holland PTC	Delft	Neth.	Varian	ProBeam	3	3-Jun	n/a
Dansk Center for Partikelterapi (DCPT)	Aarhus	Denmar	Varian	ProBeam	4	13-May	\$70m*
University of Maryland	Baltimore	USA	Varian	ProBeam	5	13-May	\$87m **
Social Medical Corp Kouseikai Takai	Tenri	Japan	SHI	VAPT	1	7-May	n/a
University of Groningen	Groningen	Neth.	IBA	ProteusPLUS	2	22-Apr	€50m*
Tianjin Hospital	Tianjin	China	ProNova	SC360	3	2-Apr	n/a
Miami Baptist	Miami	USA	IBA	ProteusPLUS	3	31-Mar	\$80m*
Huai'an First People's Hospital	Huai'an	China	AVO	LIGHT	3	25-Mar	\$40m
Zhuozhou Jian Kang Qiao Investment	Zhuochou	China	IBA	ProteusPLUS	5	28-Jan	€80m*
Total systems/treatment rooms					22	57	

*exclude typically 10-year service contract

** plus a \$65m 10-year service contract

Source: Hardman & Co Life Sciences Research, Company reports

Financial summary

Profit & Loss

Profit & Loss account						
Year end Dec (£'000)	2013	2014	2015E	2016E	2017E	2018E
LIGHT Systems sold	0	0	1	3	5	8
Sales	69	106	80	35,484	80,645	137,097
Cost of goods	-156	-203	-104	-31,935	-68,548	-108,226
Gross Profit	-87	-96	-24	3,548	12,097	28,871
Administrative expenses	-2,037	-5,085	-6,800	-8,250	-8,750	-9,250
Selling & marketing costs	0	0	0	0	0	0
R&D	0	0	0	0	0	0
Underlying EBITDA	-2,041	-5,063	-6,644	-4,522	3,547	19,871
Depreciation	-82	-118	-180	-180	-200	-250
Amortisation	0	0	0	0	0	0
Underlying EBIT	-2,124	-5,181	-6,824	-4,702	3,347	19,621
Share of JV profit/(loss)	0	0	0	0	-499	279
Share based costs	0	-469	-1,500	0	0	0
Exceptional items	-1,049	-803	-570	20,000	15,000	0
Statutory Operating profit	-3,173	-6,453	-8,894	15,298	17,848	19,900
Net financial income	-258	122	-75	77	42	-1
Underlying Pre-tax profit	-2,382	-5,059	-6,899	-4,624	3,389	19,620
Exceptional items	-539	-1,232	0	0	0	0
Reported pre-tax	-3,970	-7,563	-8,969	15,376	17,890	19,899
Reported taxation	0	0	0	0	0	0
Underlying net income	-2,382	-5,059	-6,899	-4,624	3,389	19,620
Statutory net income	-3,970	-7,563	-8,969	15,376	17,890	19,899
Period-end shares (m)	604.4	1,028.4	1,418.3	1,418.3	1,418.3	1,418.3
Weighted average shs. (m)	401.6	848.4	1,290.5	1,290.5	1,301.2	1,418.3
Fully diluted shares (m)	463.1	1,201.6	1,560.3	1,560.3	1,571.0	1,688.1
Underlying Basic EPS (p)	-0.59	-0.60	-0.53	-0.36	0.26	1.38
U/I fully-diluted EPS (p)	-0.51	-0.60	-0.53	-0.36	0.22	1.16
Statutory basic EPS (p)	-0.99	-0.89	-0.69	1.19	1.37	1.40
Stat. fully-diluted EPS (p)	-0.86	-0.89	-0.69	0.99	1.14	1.18
DPS (p)	0.00	0.00	0.00	0.00	0.00	0.00

Source: Company reports; Hardman & Co Life Sciences Research

Key metrics						
Year end Dec (£'000)	2013	2014	2015E	2016E	2017E	2018E
Operating ratios						
Cost of goods	226.3%	190.5%	130.0%	90.0%	85.0%	78.9%
Gross margin	126.3%	-90.5%	-30.0%	10.0%	15.0%	21.1%
Admin	nm	nm	nm	23.3%	10.9%	6.7%
Sales & Marketing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EBITDA	nm	nm	nm	-12.7%	4.4%	14.5%
Operating profit	nm	nm	nm	-13.3%	4.2%	14.3%
Reported tax rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Company reports; Hardman & Co Life Sciences Research

Balance sheet

- ▶ Forecast cash position at the end of December 2015 is about £8.6m, net cash at £7.6m
- ▶ Stock build-up is consistent with the preparation of facilities ahead of them becoming fully operational
- ▶ Financing for Harley Street (ca.£20m) in 2016, coupled with milestones and contributions from the China deals (ca.£15m) in 2017 suggest that AVO will sufficient cash to take the company beyond first patient treatments

Balance sheet						
@ 31st Dec. (£'000)	2013	2014	2015E	2016E	2017E	2018E
Shareholders' funds	6,908	11,132	25,214	40,589	58,479	78,378
Cumulated goodwill	0	0	0	0	0	0
Total equity	6,908	11,132	25,214	40,589	58,479	78,378
Share capital	6,044	10,284	14,183	14,183	14,183	14,183
Reserves	864	847	11,031	26,406	44,296	64,195
Working capital facility	0	0	0	20,000	40,000	50,000
Bank overdrafts	3,190	988	1,000	1,000	1,000	1,000
less: Cash	149	1,465	8,641	29,855	44,344	46,299
Invested capital	9,950	10,655	17,573	31,735	55,135	83,080
Fixed assets	673	882	1,000	1,570	2,195	2,844
Intangible assets	8,233	9,218	11,200	12,200	13,200	14,200
Investments	2,006	1,197	997	997	997	997
Goodwill	0	0	0	0	0	0
Stocks	37	1,112	6,000	19,161	41,129	64,935
Trade debtors	29	74	160	8,871	20,161	34,274
Other debtors	1,168	518	606	606	606	606
Trade creditors	-723	-1,143	-300	-11,671	-22,655	-34,558
Tax liability	-76	-225	0	0	0	0
Other creditors	-1,398	-978	-2,000	-2,000	-2,000	-2,000
Debtors less creditors	-1,000	-1,754	-1,624	-4,194	-3,887	-1,678
Invested capital	9,950	10,655	17,573	31,735	55,135	83,080
Net cash/(debt)	-3,042	477	7,641	8,855	3,344	-4,701
Net debt/equity (%)	-44.0%	4.3%	30.3%	21.8%	5.7%	-6.0%
After-tax ROIC	-21%	-44%	-39%	-15%	6%	24%
Interest cover (x)	n/a	n/a	n/a	n/a	n/a	n/a
Dividend cover (x)	n/a	n/a	n/a	n/a	n/a	n/a
Cap-ex/depreciation (x)	659%	277%	417%	417%	413%	360%
Cap-ex/sales (%)	789%	307%	938%	2.1%	1.0%	0.7%
NAV/share (p)	1.7	1.3	2.0	3.1	4.5	5.5
Stock days	44	1035	12480	144	161	179
Debtor days	-76	175	533	46	66	72
Creditor days	-846	1680	2,532	68	91	96

Source: Company reports; Hardman & Co Life Sciences Research

Cashflow

Cashflow						
Year end Dec (£'000)	2013	2014	2015E	2016E	2017E	2018E
Operating profit	-2,124	-5,181	-6,824	-4,702	3,347	19,621
Depreciation	82	118	180	180	200	250
Amortisation	0	0	0	0	0	0
Stocks	-37	-1,075	-5,000	-13,161	-21,968	-23,806
Trade & other receivables	-83	605	-20	-8,711	-11,290	-14,113
Trade & other payables	43	312	300	9,281	10,984	11,903
Exceptionals/provisions	0	-803	0	20,000	15,000	0
Other	-413	-355	0	0	0	0
Net cash used in operations	-2,531	-6,380	-11,364	2,887	-3,727	-6,145
Net interest	-331	-178	-75	77	42	-1
Tax	0	0	0	0	0	0
Operational cashflow	-2,862	-6,558	-11,439	2,964	-3,685	-6,146
Capital Expenditure	-544	-327	-750	-750	-825	-899
Capitalised intangibles	-188	-985	0	-1,000	-1,000	-1,000
Sale of fixed assets	0	0	0	0	0	0
Free cashflow	-3,594	-7,870	-12,189	1,214	-5,510	-8,046
Dividends	0	0	0	0	0	0
Acquisitions	0	0	0	0	0	0
Disposals	1,273	6	290	0	0	0
Other investments	0	0	-2,000	0	0	0
Cashflow after investments	-2,321	-7,864	-13,899	1,214	-5,510	-8,046
Share repurchases	0	0	0	0	0	0
Share issues	2,437	10,158	21,063	0	0	0
Currency effect	0	0	0	0	0	0
Other	42	1,225	1,000	0	0	0
Change in net debt	158	3,519	8,164	1,214	-5,510	-8,046
Opening net cash	-3,200	-3,042	477	8,641	9,855	4,344
Closing net cash	-3,042	477	8,641	9,855	4,344	-3,701
Hardman cashflow/share (p)	-0.7	-0.8	-0.9	0.2	-0.3	-0.4

Source: Company reports; Hardman & Co Life Sciences Research

Valuation

The following table provides key comparator financial information. AVO is a pure play on proton therapy. The nearest direct competitor in terms of proton therapy is Ion Beam Applications or IBA, in which proton therapy represented ca.57% of 1H 2015 revenues and 62% of EBITDA. Varian Medical Systems and Elekta are the leading providers of radiotherapy systems whilst Accuray sells the only robotic radiosurgery system, CyberKnife. Of these, Varian also has a presence in proton therapy.

Comparative valuations for radiotherapy companies

Company			Share price	Shares (m)	Mkt. Cap. (lc.m)	Net Cash (m)	EV (lc. m)	Mkt. Cap. (£m)	EV (£m)
IBA	IBAB.BR	EURO	31.8	28	901	-13	913	648	657
Varian Medical Sys.	VAR	USD	76.5	100	7,638	524	7,113	4,977	4,636
Elekta *	EKTAB.ST	SEK	64.9	381	24,744	-2,437	27,182	1,895	2,081
Accuray *	ARAY	USD	5.5	79	434	-39	473	283	308
Advanced Oncotherapy	AVO.L	p	7.3	1,418	103	8	95	103	95

Company		P/E			EV/sales			EV/EBITDA		
		2014	2015E	2016E	2014	2015E	2016E	2014	2015E	2016E
IBA	IBAB.BR	43.6	790.4	654.7	4.1	2.9	3.4	32.3	27.9	26.0
Varian Medical Sys.	VAR	18.5	17.5	16.9	2.3	2.3	2.2	10.7	10.9	10.3
Elekta *	EKTAB.ST	52.1	34.5	27.7	2.5	2.4	2.2	15.7	14.9	12.4
Accuray *	ARAY	-11.2	-14.1	-47.4	1.3	1.2	1.1	345.4	57.7	19.5
Advanced Oncotherapy	AVO.L	-12.2	-13.6	-20.2	894.8	1,189.9	2.7	-18.8	-14.3	-21.1

* Valuation ratios adjusted for calendar year end

Prices at close of business on 1st February 2016

Source: Hardman & Co Life Sciences Research

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