

MagForce

Interim results

The land of opportunity awaits NanoTherm

MagForce is making progress in its strategy to drive the uptake of its thermal ablation treatment, NanoTherm. It is approved in Europe for brain tumours and in a registrational US study for prostate cancer. Sales in Europe have been slow to date, but MagForce's realigned commercial strategy in Europe could be the catalyst for meaningful growth in the top line and enable sustainable profitability from 2022. In the pivotal US study, enrolment of the first phase has completed, with approval and launch expected in Q420. Long-term growth depends on commercial treatments in the US. We value MagForce at €269.7m or €9.8/share.

Year end	Revenue (€m)	PBT* (€m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
12/17	0.7	(9.5)	(36.0)	0.0	N/A	N/A
12/18	0.1	(8.7)	(32.8)	0.0	N/A	N/A
12/19e	0.7	(10.5)	(38.7)	0.0	N/A	N/A
12/20e	2.9	(6.6)	(23.7)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

European roll-out installs first device ex-Germany

Revenues from NanoTherm have not grown materially since commercial treatments (late 2015), primarily due to ongoing issues with reimbursement in Germany. The first tranche from its EIB loan has been utilised (in part) to establish a new treatment centre in Poland, where management believes there is significant demand from private patients for NanoTherm. New treatment centres (ex-Germany) could be the catalysts for meaningful growth in the top line and enable sustainable profitability from 2022.

US prostate cancer study progressing

MagForce has completed treatment of the first 10-patient cohort in its pivotal prostate cancer study required by the US FDA for approval. Importantly, it has reported that the procedure for instilling its NanoTherm particles has now been standardised and the study can enrol up to 110 additional patients to establish efficacy in thermally ablating prostate cancer lesions. Positive results would provide a key value inflection (Q420) for the company.

Financials: EIB extends cash reach until profitability

End-June 2019 net debt was €15.1m, primarily from drawing down the first tranche (€10m) of the loan from its facility with the EIB in January 2018 (€25m remaining). Following a private placement of 1.2m shares (in June 2019) MagForce raised gross proceeds of €5m. We believe an additional €15m will be required to fund operations until profitability, which we forecast in 2022.

Valuation: €269.7m (€9.8/share)

Our revised valuation of MagForce is €269.7m (previously €261.5m), based on a risk-adjusted NPV analysis. We have updated for net debt, FX and rolled forward our model. We note that delays in the US trial would materially affect our valuation, and prudent execution is needed to launch the asset on time (the US is ~70% of our valuation).

Healthcare equipment & services

11 November 2019

Price €4.52

Market cap €125m

\$1.11/€

Net debt (€m) at 30 June 2019 15.1

Shares in issue 27.6m

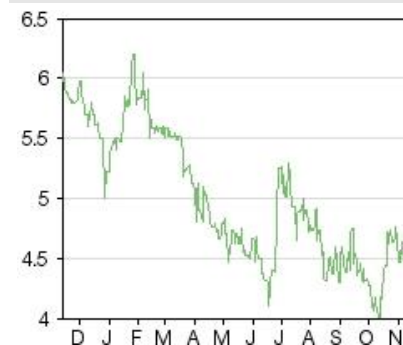
Free float 66%

Code MF6

Primary exchange Frankfurt (Xetra)

Secondary exchange N/A

Share price performance



% 1m 3m 12m

Abs 8.0 (3.0) (24.1)

Rel (local) (2.3) (13.1) (33.9)

52-week high/low €6.10 €4.01

Business description

MagForce is a German company with the first Europe-approved nanotechnology-based therapy to treat brain tumours. NanoTherm consists of a nanoparticle instillation into the tumour, activated by an alternating magnetic field, producing heat and thermally destroying or sensitising the tumour.

Next events

Additional NanoActivator installations in Europe (ex-Germany) 2020

Trial completion, FDA approval and launch of NanoTherm in the US 2020

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Expanding NanoTherm access beyond Germany

During H119, MagForce announced the establishment of its first treatment centre outside Germany in Lubin, Poland. This marked an important moment for the company, as it is a clear signal that MagForce is progressing with its plans to broaden its geographical coverage, and enables it to provide patients, who were previously unable to travel across the border into Germany, to access NanoTherm. Management has highlighted that there has been significant demand (c 280 patient enquires) from Poland and this first treatment centre could prove to be the much-needed catalyst to drive near-term uptake in revenues; we expect that c 20 patients will be treated by year end. A small investigator-led trial will also be conducted before NanoTherm is included on local reimbursement lists, until which time patients will pay out of pocket for NanoTherm. However, unlike patients having to travel cross-border, all other treatment costs are covered.

In June 2019, an agreement was made with the Paracelsus Clinic in Zwickau, Germany, to establish a new treatment centre, which will broaden MagForce's geographical coverage further, although treatments are still likely to consist of private paying patients until reimbursement in Germany is attained. As MagForce has now established the ability to quickly install devices in a more cost-effective manner, and is making progress in its European roll-out, we expect it will continue to install two NanoActivator devices a year in new markets. We estimate that c 4,000 deaths a year were attributed to GBM in Spain and Italy during 2018 (source: [Global Cancer Observatory](#)), markets into which management has highlighted it is looking to expand next and is in negotiations with neurosurgical units to establish new treatment centres.

US prostate cancer launch expected end 2020

NanoTherm therapy is regulated as a device rather than a drug in the US, and therefore follows a medical device regulatory route to approval. In August 2019, MagForce announced that it had completed treatment of the first 10-patient cohort in the pivotal prostate cancer study required by the US FDA for approval. The single-arm trial aims to recruit up to 120 patients with prostate cancer (Gleason score of 7) under active surveillance and will assess NanoTherm as focal treatment for prostate lesions. MagForce has reported that the procedure for instilling its NanoTherm particles has now been standardised and the study can enrol up to 110 additional patients to establish efficacy in thermally ablating prostate cancer lesions. Management has reported initial findings from this first cohort, which indicates that treatment side effects have been minimal and in line with those of biopsies. Achieving a tolerable treatment will be key to attaining both approval and reimbursement.

We believe the largest potential for growth resides in the opportunity for MagForce's NanoTherm therapy in the US, as both urologists and payers will value a treatment that could extend the time prostate cancer patients can remain within active surveillance programmes. In lieu of a control arm in the study, we assume it will be compared to historical standard-of-care treatment outcomes to determine its benefit (similar to the glioblastoma trial). Although this might be sufficient to achieve regulatory approval, payers might require a clearer measure of patient benefit before agreeing reimbursement. Management has guided that, in its initial engagement with the Centres for Medicare & Medicaid Services, it has indicated costs similar to brachytherapy and tolerability in line with a biopsy could warrant similar reimbursement (c \$7k).

Submission for FDA review is expected in 2020. We still anticipate US approval and launch in Q420, but highlight that both prudent trial execution and timely commercial roll-out are essential in achieving this goal. We forecast peak sales of \$264m in 2026.

Valuation

Our revised valuation of MagForce is €269.7m (€9.8m/share) vs €261.5m or €9.5 per share previously, based on a risk-adjusted NPV analysis. It is centred on MagForce's NanoTherm therapy, risk-adjusted to reflect the current development status and respective core strategies for the EU and US. We value only GBM in the EU and prostate cancer in the US. Although we recognise MagForce's future intention to eventually treat additional indications in each region, we do not ascribe value to this in our base case. In each indication and region, our valuation includes our revenue forecasts and estimates for costs, including R&D and S&M. A summary of the assumptions we have made in our peak sales forecasts is outlined in Exhibit 1.

Exhibit 1: Peak sales forecasts

Product	Country	Indication	Launch/peak sales	Assumptions
NanoTherm/ NanoActivators	Germany	GBM	2015 €9m (\$10m)	With the installation of a new device in Zwickau expected this year, management guides that three NanoActivator devices will be fully commercial in Germany during 2019; we do not expect any more devices will be installed thereafter as expansion will be outside Germany. We assume these devices will ramp up to peak usage in 2025, which we translate to c 150 patients/device/year or 450 patients treated at peak. In Germany we estimate the annual mortality rate from glioblastoma will be c 3,500 in 2025, which is representative of the eligible patients, indicating peak penetration of c 13%. Assuming treatment maintains its pricing at €23k/patient, we forecast peak sales of €9m.
	Europe (ex-Germany)	GBM	2019 €40m (\$45m)	With the installation of the first device in Lublin, Poland, in 2019, one NanoActivator device will be fully commercial during 2019; we expect two more devices will be installed a year (ex-Germany) thereafter. We assume these devices will ramp up to peak usage in 2025 with 150 patients/device/year treated or 1,950 patients treated at peak. In Europe (ex-Germany), we estimate the annual mortality rate from glioblastoma will be c 25,000 in 2025, which is a fair representation of eligible patients. This indicates peak penetration of c 8%. Assuming treatment maintains its pricing at €23k/patient, we forecast peak sales of €40m.
NanoTherm/ pNanoActivators	US	Prostate cancer	2020 €233m (\$264m)	Assuming a launch in Q420, we expect that MagForce will install 80 devices by 2022 in key urology practices across the US and 150 devices installed by 2026. We assume that these devices will ramp up to peak usage in 2026, which we believe translates to 250 patients/device/year or 37,500 patients treated at peak. We estimate that there will be around 170,000 patients eligible for treatment in the US in 2026, which indicates peak penetration of c 22%. Assuming treatment is priced at \$7k/patient, in line with brachytherapy, we forecast peak sales of \$264m.

Source: Edison Investment Research, [Global Cancer Observatory](#). Note: FX rate \$1.11/€.

We use a 10% discount rate in Europe and 12.5% for the US. We adjust the US opportunity to reflect the 67.9% stake in MagForce USA and attribute an 80% probability of success for approval of the device. Our valuation includes €15.1m net debt reported at 30 June 2019, plus net cash of €1.8m from the capital raised was received after the 30 June 2019 reporting date and an estimated €6m net cash held in MagForce USA, which is not disclosed in the financial statements but we have assumed from gross proceeds of the capital raise in August 2018. We use a \$1.11/€ spot rate.

Exhibit 2: MagForce risk-adjusted NPV valuation

Product	Indication	Launch	Peak sales (€m)	Peak sales (\$m)	NPV (€m)	Probability	MagForce beneficial interest	rNPV (€m)	rNPV/share (€)
NanoTherm EU	GBM (Germany)	2015	9	10	18.3	100%	100%	18.3	0.7
	GBM (ex-Germany)	2019	40	44	67.5	100%	100%	67.5	2.4
NanoTherm US	Prostate cancer	2020	236	264	355.6	80%	68%	193.2	7.0
Net cash/(debt) (AG)					(13.3)	100%	100%	(13.3)	(0.5)
Net cash/(debt) (US)					6.0	100%	68%	4.1	0.1
Valuation					434.1			269.7	9.8

Source: Edison Investment Research. Note: FX rate \$1.11/€.

Exhibit 3: Financial summary

	€'000s	2016	2017	2018	2019e	2020e
December		HGB	HGB	HGB	HGB	HGB
PROFIT & LOSS						
Revenue		474	716	67	667	2,898
Cost of Sales		(574)	(974)	(455)	(2,058)	(2,252)
Gross Profit		(101)	(258)	(388)	(1,391)	646
EBITDA		(6,555)	(8,763)	(7,068)	(9,583)	(5,348)
Operating Profit (before amort. and except.)		(7,457)	(9,434)	(7,068)	(9,583)	(5,348)
Intangible Amortisation		(4)	(1)	0	0	0
Exceptionals		0	2,024	13,896	0	0
Other		0	0	(877)	0	0
Operating Profit		(7,461)	(7,411)	5,951	(9,583)	(5,348)
Net Interest		231	(53)	(1,591)	(892)	(1,210)
Profit Before Tax (norm)		(7,226)	(9,487)	(8,659)	(10,475)	(6,558)
Profit Before Tax (reported)		(7,230)	(7,464)	4,360	(10,475)	(6,558)
Tax		(1)	(1)	(2)	0	0
Profit After Tax (norm)		(7,227)	(9,488)	(8,661)	(10,475)	(6,558)
Profit After Tax (reported)		(7,231)	(7,465)	4,358	(10,475)	(6,558)
Average Number of Shares Outstanding (m)		26.0	26.3	26.4	27.1	27.6
EPS - normalised (c)		(27.8)	(36.0)	(32.8)	(38.7)	(23.7)
EPS - (reported) (€)		(0.28)	(0.28)	0.17	(0.39)	(0.24)
Dividend per share (€)		0.0	0.0	0.0	0.0	0.0
Gross Margin (%)		N/A	N/A	N/A	N/A	22.3
EBITDA Margin (%)		N/A	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)		N/A	N/A	N/A	N/A	N/A
BALANCE SHEET						
Fixed Assets		18,742	20,672	34,470	34,402	34,744
Intangible Assets		3	2	91	186	280
Tangible Assets		3,706	3,589	3,401	3,239	3,486
Investments		15,033	17,082	30,978	30,978	30,978
Current Assets		1,536	1,360	2,664	3,999	2,711
Stocks		71	301	291	169	185
Debtors		71	85	95	365	1,588
Cash		614	665	1,493	2,679	153
Other		780	307	785	785	785
Current Liabilities		(4,431)	(3,747)	(3,049)	(2,891)	(3,502)
Creditors		(4,431)	(3,747)	(3,049)	(2,891)	(3,502)
Short term borrowings		0	0	0	0	0
Long Term Liabilities		(197)	(5,091)	(15,926)	(22,926)	(27,926)
Long term borrowings		0	(5,012)	(15,876)	(22,876)	(27,876)
Other long term liabilities		(197)	(79)	(50)	(50)	(50)
Net Assets		15,650	13,194	18,159	12,584	6,026
CASH FLOW						
Operating Cash Flow		(1,079)	(5,286)	(4,636)	(9,307)	(5,335)
Net Interest		231	(53)	(2,468)	(892)	(1,210)
Tax		(1)	(1)	(2)	0	0
Capex		(115)	(553)	(499)	(515)	(982)
Acquisitions/disposals		0	0	0	0	0
Financing		0	5,000	0	4,900	0
Dividends		0	0	0	0	0
Net Cash Flow		(964)	(894)	(7,605)	(5,814)	(7,527)
Opening net debt/(cash)		(1,393)	(614)	4,347	14,383	20,197
HP finance leases initiated		0	0	0	0	0
Other		185	(4,067)	(2,431)	0	0
Closing net debt/(cash)		(614)	4,347	14,383	20,197	27,723

Source: Company accounts, Edison Investment Research. Note: Reported other operating income (non-cash) relating to the transfer of shares between subsidiaries has been booked as an exceptional item in our model.

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