

## Pharmaceuticals &amp; Biotech



Source: Bloomberg

## Market data

Ticker	WDC
Price (p)	14.0
12m High (p)	16.25
12m Low (p)	11.00
Shares (m)	59.46
Mkt Cap (£m)	8.3
EV (£m)	7.3
Market	LSE

## Description

WideCells is a provider of umbilical cord blood stem cell storage and associated services, principally an insurance policy to cover the cost of future stem cell-based treatments.

## Company information

CEO	João Andrade
CFO	David Bridgland
Chairman	Graham Hine
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	<a href="http://www.widecellsgroup.com">www.widecellsgroup.com</a>

## Key shareholders

João Andrade	13.5%
Lopes Gil	13.5%
Miton Group	9.9%
Dominus Investments Ltd	7.3%
Joseph Ferreira	6.5%
Luis Gil	6.4%

## Next event

Interims	Sept
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## Analysts

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## WideCells Group plc

### CellPlan launch marks commercial transition

WideCells' recent launch of its CellPlan stem cell insurance/medical concierge service marked an important transition for this fast moving company. In less than one year, WideCells has established a platform to market CellPlan to new and existing umbilical cord blood storage clients and established complementary businesses in stem cell storage/processing, research and education. WideCells offers an attractive investment opportunity linked to the burgeoning field of stem cell science that is largely without scientific or insurance risk.

- ▶ **Outlook:** WideCells' principal focus is providing an insurance product to cover the cost of stem cell therapy to people with preserved cord blood, including through its own storage business and through partnerships with existing players. WideCells appears well placed to exploit a first-mover advantage in this business and has the potential over time to become the dominant
- ▶ **Market:** The market for CellPlan is nascent, but WideCells can already address a substantial potential client base with c.30,000 stored cord blood samples. The speed with which WideCells has established partnerships with cord blood storage firms suggests there is a high degree of interest in the wider cord blood storage sector in adopting CellPlan as part of their offering.
- ▶ **Operations:** WideCells has put in place arrangements to provide medical support to CellPlan clients and underwrite the insured risk. It has obtained regulatory and legal approvals to offer insurance throughout the EU and has launched CellPlan to new and existing cord blood storage clients.
- ▶ **Sensitivities:** The ability to exploit its first-mover advantage and ultimately become the dominant provider of cord blood stem cell therapy insurance is the key determinant for WideCells's long-term success. The direct sales of CellPlan and cross-selling by partners will be the key revenue drivers.
- ▶ **Financials:** The company has guided that it expects c.10,000 CellPlan policy sales in the first year (suggesting ~2,000-3,000 in 2017), although these projections should be considered tentative at this stage. If it can meet these targets, Shard Capital estimates WideCells would become breakeven in 2018 and generating an operating profit of £1.8m on revenues of £5.0m in 2019.
- ▶ **Investment summary:** WideCells offers a funded business model with attractive economics and potential long-term recurring revenue. It has the first mover advantage in the area of stem cell insurance, which seems likely to support a single dominant player in the longer-term. The shares offer exposure to the burgeoning field of stem cell science, largely without scientific or medical risk. The current valuation (EV = c£7m) seems to provide an attractive risk/reward balance.

### Financial summary

Year end Dec (£,000)	2014	2015	2016
Sales	118	51	25
PBT	(262)	(287)	(1,267)
EPS (p)	N/A	(0.02)	(0.03)

Background/explanation of terms	
Term	Comment
Cord blood	Blood remaining in the placenta and the attached umbilical cord after childbirth. It is rich in both hematopoietic stem cells (HSCs; blood forming cells) and mesenchymal stem cells (MSCs; which form bone, muscle and connective tissue). Cord blood, when available, is the preferred source for stem cells in the treatment of many blood disorders.
Stem cells	Undifferentiated cells that can differentiate into specialised cells. Stem cells can be collected from a variety of sources including cord blood, dental pulp from deciduous teeth, bone marrow, adipose tissue and peripheral blood.
Cord blood banking	The process of collecting and processing blood from the umbilical cord and preserving it or derived stem cells from for possible future therapeutic use. Cord blood may be stored in public banks (for general population use) or privately for the use of the child or a sibling. The latter has been commercially available on a fee-for-service basis for c20 years.
Cord tissue	Umbilical cord tissue contains other cell types such as vascular endothelial and perivascular cells, which may be of future therapeutic benefit, although this is not established. Storing cord tissue with blood is usually offered as it may provide further options for future treatments.
Cord blood/ tissue processing	Umbilical cord samples are collected immediately after birth and transported under controlled conditions to a central laboratory, checked for viral/bacterial contamination, and assessed for the quality and viability of stem cells. Samples are transferred under aseptic conditions to a labelled storage bag, frozen down under controlled conditions and stored in the vapour phase of liquid nitrogen.
Cost of storage	In the UK, prices average around £2,000 for cord blood collection, processing and 25 years of storage. Competition between the main providers seems to focus on price and the split between upfront and annual service costs. Pricing in Spain is similar to the UK and lower in Portugal.
Stem cell transplantation	Haematopoietic stem cell transplantation (HSCT) is used in leukaemia and can be used to treat other blood cell disorders. Stem cells are usually sourced from a matched donor (eg a close relative), known as allogeneic HSCT, as stored cord blood is not usually available. This procedure carries a risk of graft vs host disease (GvHD). Autologous HSCT (from a patient's own stored cord blood) can be considered when a sample is available, although in older children and adults it would need to be supplemented with matched donor stem cells.
How many stem cell treatments have used frozen cord blood	The first transplantation using haematopoietic stem cells from cord blood took place in 1988 and since then more than 35 000 cord blood transplants have been performed. However, the number of autologous HSCTs performed is likely to be a small proportion of this number.
Potential cord blood stem cell treatments	Stem cell transplants have been used or proposed in the treatment of some 80 or more disorders including various anaemias, haematological cancers, inherited metabolic disorders and immune-deficiencies. However, autologous HSCTs may not be suitable for some cases and allogeneic HSCT used in preference.
Approved stem cell therapies	New York Blood Center's Hemacord allogeneic cord-blood derived hematopoietic stem cell therapy product was approved by the FDA in 2013.
Costs of stem cell therapy	This is variable but very high. HSCT for leukaemia costs (~£200,000-£300,000/patient), in part because it involves lengthy ICU stays while the immune system is reconstituted.
Will the costs be paid for by governments/providers	Treatment outside leukaemia is unlikely to be reimbursed or covered by government healthcare schemes as SCT is considered experimental. Therefore patients may have to pay for therapies privately and/or enrol in clinical trials. In these circumstances, there are likely to be considerable costs borne by the family, including overseas travel and accommodation etc.
Clinical trials of cord blood stem cell therapies	There are a number of ongoing clinical trials of cord blood-derived stem cells in the treatment of infants/young children with cerebral palsy, autism, hydrocephalus and type 1 diabetes.
Market for cord banking	There are more than 500 cord blood banks operating worldwide and more than 3 million samples are believed to be in storage. Some 250,000 new samples are stored/year.

Source: Shard Capital Research, various sources.

## Insuring for stem cell therapy

WideCells is an early-stage company but one that has developed rapidly since its IPO last year, both on an operational and legal/regulatory basis. In less than one year, it has established stem cell processing and storage operations in Manchester and, via an affiliate, in São Paulo, Brazil, and has set up a trading office for CellPlan in Porto, Portugal. It has also entered into a number of commercial and other agreements (listed overleaf), principally to market its CellPlan stem cell insurance product. Following the legal and regulatory approvals, CellPlan was launched in June 2017 in the UK and will shortly be rolled out across the wider Eurozone.

WideCells claims that CellPlan is the world's first comprehensive stem cell healthcare insurance plan and medical concierge service. The plan is supported by Best Doctors, a US-based provider of expert medical second opinion, and underwritten with a major reinsurance company.

Best Doctors is a market leader in the development and implementation of niche health insurance products and focuses on high cost, complex care cases. The company operates a network of 50,000 medical experts globally who are peer-rated as being in the top 5% of physicians in more than 450 medical specialties. Best Doctors is currently subject to a pending acquisition by Teladoc, a US-listed telehealth company (NYSE: TDOC, market capitalisation \$1.94bn).

WideCells believes that CellPlan will be attractive to parents who have already taken up cord blood banking without realising that potential treatments are not covered by government health arrangements or other private medical insurance. WideCells believes it is addressing an unmet need by offering an insurance product to provide access to international stem cell specialists, hospitals and financial cover for up to €1 million worth of medical, travel and accommodation expenses and \$1m outside Europe.

CellPlan appears to have little, if any, competition. Private cord blood storage companies have focussed purely on cryopreservation contracts and few have offered any kind of medical insurance. One that has done so is the Israeli company, Taburit, but even this does not appear to feature very prominently in its marketing.

The company has finalised details about CellPlan, which allay certain concerns outlined in Shard Capital's initiation note (Jul 2016). It has confirmed, for example, the CellPlan policy will cover only two procedures: haematopoietic stem cell transplant (HSCT for treatment of some 82 blood diseases such leukaemia) or stem cells treatment of cerebral palsy (an unapproved medical use, currently in clinical trials).

Otherwise, terms are much as would be expected. The plan will only be valid if: the recipient of the transplant is insured; the use of stem cells used are from a donor who is insured; the sample stored is declared at the start of the policy; and blood tests performed prior to storage show an amount of viable stem cells for a HSCT or a clinical trial.

The conditions for medical treatment are: the procedure is performed during the period of cover; the treatment is medically necessary; the diagnosis leading to the covered medical procedure is confirmed by CellPlan's medical expert panel; and the condition or illness was not previously diagnosed, treated or otherwise evident or was the subject of genetic counselling or medical advice prior to the start of the

policy. CellPlan also requires that the costs are within the sum insured and certain limits and that treatment is arranged by Best Doctors.

WideCells will initially market CellPlan through its commercial arrangements with Biovault in the UK and with Hemocord in Brazil. The company expects more cord blood storage companies to join its CellPlan Excel Membership Programme, in order to sell CellPlan. Currently, it has companies with more than 175,000 stored samples under qualification. WideCells expects that the CellPlan insurance will be priced at £170/year and after commission and reinsurance costs the expected retained income for WideCells will be in the region of £50 per policy.

### WideCells: Key recent and forthcoming commercial events

Date	Comment
Q3	Expected timing of launch of WideCells cord blood storage service.
Jul 17	Launch of a fully FCA compliant/authorised e-commerce platform ( <a href="http://www.cellplan.com">www.cellplan.com</a> ), which will allow direct sale of CellPlan to families who are or have taken up cord blood stem cell storage. This will allow WideCells to sell CellPlan to families that intend or have used cord blood banks that are not currently part of the authorised reseller/CellPlan Excel Member Programme, but meet the standards of that programme.
4 Jul 17	Definitive agreement with Hemocord Clinica Medica, a leading stem cell storage provider in Brazil, to market Cellplan to its new and existing customers. Hemocord has been operating since 2004 and has around 5,000 samples in storage.
27 Jun 17	CellPlan launched to Biovault's new and existing customers. All of Biovault's new cord blood storage customers will receive CellPlan free of charge for a 12 month period as part of a new combined offering.
6 Jun 17	Receipt of a licence from the Portuguese Insurance and Pension Funds Supervisory Authority and grant of passport rights, allowing WideCells to offer CellPlan in the UK, Portugal and Spain. Request for grant of blanket request under the Freedom of Services Act to sell CellPlan across the wider Eurozone (expected to take <30 days).
Apr-17	Cord blood storage companies in multiple continents which together store over 175,000 samples have applied to join the CellPlan Excel Membership Programme to sell CellPlan to their clients.
Q2 17	Completion of fit out of Institute of Stem Cell Technology in Manchester and application for a Human Tissue Authority license. The initial processing capacity is expected to be approximately 1,000 cord blood and 1,000 cord tissue samples per year. Additional licence applications for dental pulp and adipose stem cells expected in 2017.
9 Jan 17	Definitive, five-year agreement signed with Biovault, which becomes the first member of the Excel Membership Programme. Biovault and WideCells agree a strategy to market CellPlan to new and existing customers with Biovault receiving a commission based on gross premiums.
30 Nov 16	Research agreement with Qigenix to undertake a research project at WideCells' Institute of Stem Cell Technology in Manchester, UK. Research project generates a fee of £100,000, payable in instalments.
7 Nov 16	Letter of intent covering marketing partnership with Biovault Technical, the UK's largest private human tissue storage company. Biovault operates in the UK, the Middle East and Asia and has a register of over 25,000 samples.
Nov 16	Establishment of trading office for CellPlan in Porto, Portugal. Portugal is a cost-efficient location (relative to the UK) and allows WideCells to retain EU passport rights for financial services post-Brexit.
Q4 16	Completion of fit out of a facility, named Institute of Stem Cell Technology laboratory, at the University of Manchester Innovation Centre. The facility comprises two clean rooms for stem cell processing and a large room for cryopreservation. Application to the Human Tissue Authority for a Human Application Licence.
Q4 16	Finalised the terms and conditions for CellPlan and agreements with Best Doctors.
Sept 16	Launch of WideCells Brazil, under a licensing agreement with Biocells Brasil. Biocells, which has been operational since 2012 and has c. 400 clients, will rebrand its umbilical cord processing and storage service as BabyCells. WideCells will receive a royalty on stem cell storage revenues.

Source: Shard Capital Research, WideCells.

## Financial projections

WideCells presented financial targets/projections at its recent AGM (see table below), which suggest it may be able to sell 10,000 CellPlan policies in the first year, 30,000 in year two and 60,000 in year three. It has also projected 500 new cord blood samples stored in the first year, 1,500 in year two and 3,000 in year three. If it can achieve these figures, the business would become profitable in its first business plan year, although it is difficult to estimate how much investment in sales and marketing would be required.

### Financial projections based on business plan sales targets

	Yr 1	Yr 2	Yr3
No of new samples	500	1,500	3,000
No of new policies	10,000	30,000	60,000
Cumulative policies	10,000	40,000	100,000
Total revenue (£'000)	1,200	3,950	9,200
Gross profit (£'000)	950	3,200	7,700

*Note: Shard Capital Research estimates based on Widecells' sales targets*

However, it is important to note that the business plan is not in phase with the financial years. On the assumption that the business plan's year one started in 1 July 17 (when CellPlan was launched), Shard Capital has prepared illustrative P&L forecasts, shown below (note this case also assumes 95% renewal of policies in each subsequent year). Shard Capital has assumed that operating costs in 2017 are of the order of £2m (including some one-off expenses) with modest (~10%) growth in subsequent years. On this basis, WideCells would break even at operating level in 2018.

### Financial projections, adjusted to financial years

	2017	2018	2019
No of new samples	125	950	1,484
No of new policies	2,155	23,660	30,675
Cumulative no of policies	2,155	23,553	53,186
Total revenue (£'000)	407	2,703	4,985
Gross profit (£'000)	345	2,228	4,243
Operating profit (£'000)	(1,685)	(2)	1,774

*Note: Shard Capital Research estimates, based on Widecells' sales targets*

WideCells recorded a pre-tax loss of £1.27m in 2016, although this would have included c£260,000 of one-off costs in relation to the IPO. The company ended 2016 with cash of £1.1m, although with net of liabilities of £806k, net cash was ~£300k. In April this year, it raised gross proceeds of c£650k in a placing, so *pro forma* net cash at the start of the year was of the order of £1m.

Shard Capital is not publishing formal financial projections until there is greater clarity over the sales trajectory for CellPlan. Without commenting on WideCells' internal projections, Shard Capital has tested a more conservative scenario, where there is a slower ramp of sales of both cord blood samples and CellPlan policies. It should be noted that, even under this scenario, WideCells reaches breakeven at operating profit level in its business plan year four (year to Jun 2021).

**Illustrative financial model, slower sales ramp**

	Yr 1	Yr 2	Yr 3	Yr 4
No of new samples	250	500	750	1,250
No of new policies	2,000	5,000	10,000	20,000
Total no of policies	2,000	6,650	16,150	35,150
Total revenue (£'000)	575	1,183	2,033	3,733
Gross profit (£'000)	450	933	1,658	3,108
Operating profit (£'000)	(1,580)	(1,297)	(812)	342

Source: Shard Capital Research

### Valuation

WideCells is an early stage, essentially pre-revenue business and the uncertainties around the sales trajectories particularly for CellPlan makes it difficult to provide an explicit valuation. However, the company has potential to be fast growing and the shares can be considered to offer exposure to the burgeoning field of stem cell science, largely without scientific or medical risk. In this context, the current valuation (EV=c.£7m) seems to provide an attractive risk/reward balance.

### Sensitivities

The key sensitivities are the uptake of the CellPlan insurance product among new cord blood storage clients and cross-selling by partner companies are likely to be the key drivers of success. There are risks that competitors may adopt a similar strategy and/or make a competing insurance product more prominent in their promotion. The other key risks/sensitivities are operational and financial and are typical of any early stage venture. It is possible that the corporate/strategic objectives of Best Doctors in relation to CellPlan could be negatively affected after the companies' acquisition, although there is nothing to suggest this at this point.

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