

Polarean Imaging

FY24 results – sales growth guidance reiterated

8 May 2025

Current price

1.03

TICKER

[POLX](#)

Market Cap

£12.4m

Net cash (31 Dec 2024)

US\$12.1m

Free Float

58%

3mo Av. Daily Volume

1.9m

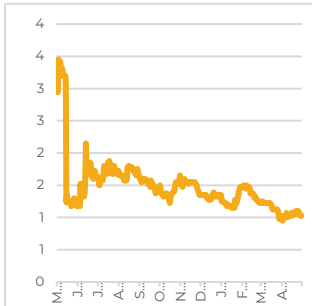
Brokers

Stifel

Index

FTSE AIM

Share Price Performance



Source: Bloomberg

Polarean is a medical device company whose XENOVIEW® system employing hyperpolarised Xenon-129 gas in MRI scanning enables unparalleled imaging of lung function and without the radiation risk associated with scintigraphy or CT scan.

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XENOVIEW® system enables unparalleled imaging of lung function

Polarean has more than tripled revenue YoY to US\$3.1m for the year to December 2024 and raised the gross margin by 841 basis points, confirming that it is on a path to hyperbolic growth. Almost more importantly, the cost of a Phase III trial for the use of its XENOVIEW® technology in gas exchange has been halved to US\$4.0m-US\$4.5m. The cash runway has been extended to 2Q26 and the company reiterated revenue guidance for 2025 of US\$5.0m-US\$6.0m. Polarean has potential upside many times its current market capitalisation, we calculate, based on observable deal metrics and our NPV analysis, while the valuation is so low, it could attract take-over interest, we believe.

The purpose of AIM listed Polarean is to revolutionise pulmonary medicine through direct visualisation of lung function, thereby radically improving patient care.

Polarean's proven Xenon MRI platform enables unparalleled imaging of lung function in conjunction with standard MRI scanning of the chest cavity. XENOVIEW® allows functional imaging of both ventilation (breathing) and gas exchange (oxygenation of the blood) and does so without the radiation risk to patients associated with other imaging techniques. The total addressable market (TAM) in the US alone is US\$5bn of which cUS\$2bn is currently accessible pending a Phase III trial for use in gas exchange, the cost of which has now halved.

Polarean reported revenue for 2024 of US\$3,090k, up 247% YoY and above the top end of guidance, with an improved gross margin of 46.1% (2023 37.7%) resulting in a more than quadrupling in gross profit to US\$1,423k (2023 US\$335k). Operating costs were reduced across the board with a 21% reduction in the total to US\$10,173k (2023 (US\$12,892k)) driving an overall 28% reduction in the net loss to US\$8,540k (2023 (US\$11,885k)). The loss per share was reduced by 80% to US\$0.011, in part reflecting the US\$12.6m gross equity raise in June 2024. The year-end net cash position came in stronger than we forecast at US\$12.1m (YE23 US\$6.2m).

Our revised forecasts show a minimal impact for 2025, but our forecast losses for 2026 and 2027 are lowered by 25% and 35% respectively, mainly reflecting the reduced cost of the clinical trial for use in gas exchange.

The US National Institutes of Health has announced a cap on indirect cost reimbursements, resulting in a hiatus in academic research investment but Polarean reiterated its US\$5.0m-US\$6.0m revenue guidance for 2025 as its Xenon MRI system expands beyond the research environment into general hospital use.

Based on observable deal metrics we calculate an implied equity valuation for Polarean of up to US\$350m/£260m on a 10x multiple of FY28 estimated revenue, many times the current £12m market capitalisation. Our NPV analysis indicates a valuation range of US\$114m-US\$233m, based on a ten-year forecast, backing up the multi-market capitalisation upside suggested by deal revenue multiples and which excludes the value of any expansion of sales to the rest of the world.

At a glance (Yr to Dec)	Revenue (US\$m)	Clinical installations	Gross profit (US\$m)	Gross margin	EPS (US\$)	Net (cash)/debt (US\$m)
FY24A	3.1	4	1.4	46%	(0.011)	(12.1)
FY25E	5.4	10	2.5	47%	(0.008)	(3.9)
FY26E	10.4	20	5.3	51%	(0.006)	2.7
FY27E	18.3	35	10.1	56%	(0.004)	6.2
FY28E	35.0	60	19.9	57%	0.004	0.0

Source: Polarean, CAG Research.

Investment thesis

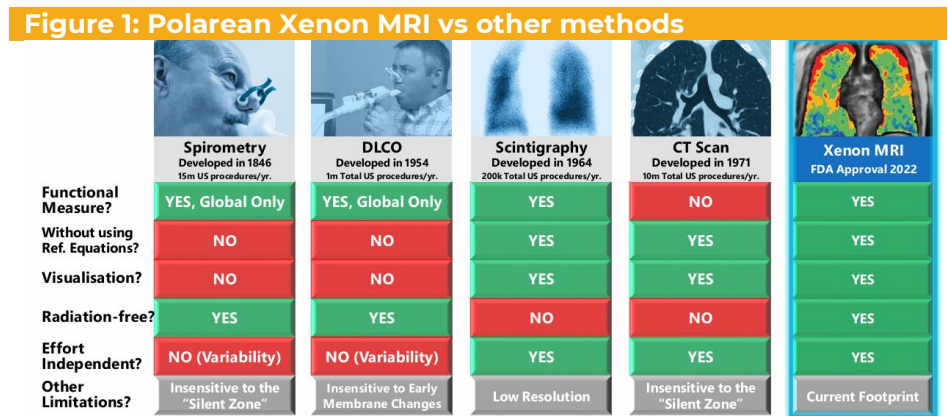
Polarean’s Xenon MRI platform enables unique, unparalleled imaging of lung function, meeting a large unmet clinical need that cannot be satisfied by other methods. Revenue for 2024 more than tripled, while the potential cost of a clinical trial enabling use of the platform in gas exchange, thereby more than doubling the total addressable market to cUS\$5bn, has been halved. Revenue guidance for 2025 of US\$5.0-US\$6.0m was reiterated. Crossing the bridge to profitability will require additional funding but the cash runway has been extended to 2Q26. Based on deal metrics and an NPV analysis, we demonstrate that Polarean has potential upside many times its current market capitalisation while the current valuation is so low that it could attract take-over interest.

The purpose of AIM listed Polarean is to revolutionise pulmonary medicine through direct visualisation of lung function, thereby radically improving patient care.

Polarean has developed a unique technology that creates the hyperpolarised state of a specific isotope of xenon gas, Xenon-129, known as XENOVIEW® which is used as an inhaled MRI contrast agent. When paired with a specially tuned Magnetic Resonance Imaging (MRI) system, this technology provides unparalleled functional imaging of the lung, offering insights that were previously unattainable.

As the lung is 85%-90% air it is extremely hard to image with other scanning techniques which also carry radiation hazard while older methods of evaluating lung performance are insensitive and provide only a broad overview of lung performance.

Figure 1 highlights the merits of XENOVIEW® MRI scanning as compared to alternative lung function evaluation methods.



Source: Polarean, CAG Research.

The complete Xenon MRI platform (Figure 2) includes the HPX (hyperpolarised xenon) Hyperpolariser System, HPX Polarisation Measurement Station (measurement equipment to confirm the level of hyperpolarization achieve), HPX Gas Handling Manifold (manages the supply of gases efficiently), the multi-dose Xenon-129 Gas Blend Cylinder, the single-use XENOVIEW® Dose Delivery Bag, XENOVIEW® 3T Chest Coil, and the XENOVIEW® imaging software (not shown). The system also includes an HPX Phantom (not shown), which ensures the required quality control of the Xenon MRI platform.

Figure 2: XENOVIEW® system

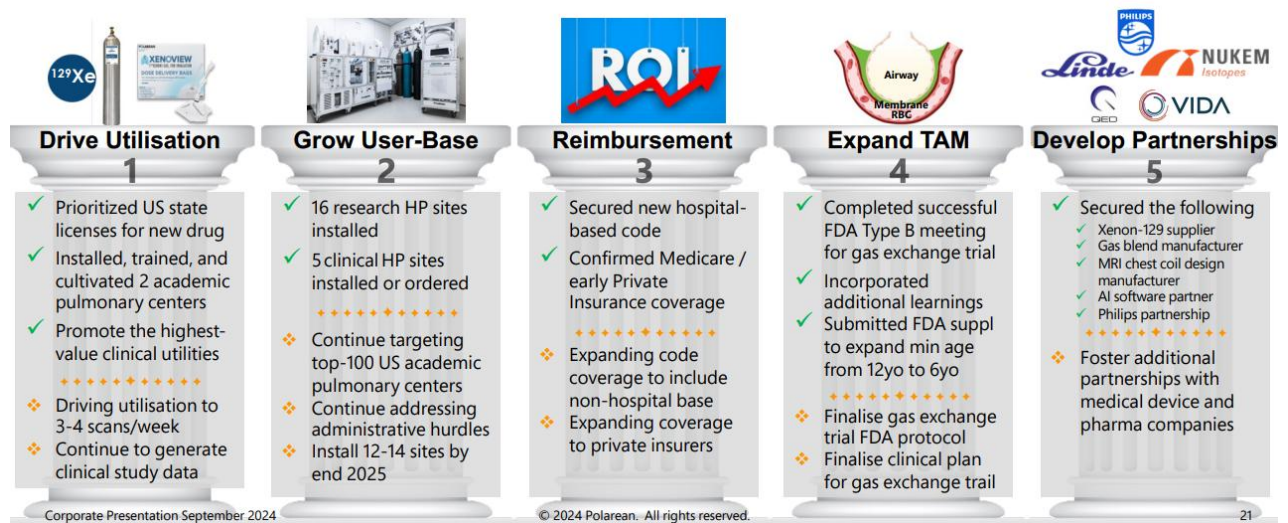


Source: Polarean, CAG Research.

Lung disease affects tens of millions of people in the US and hundreds of millions of people worldwide, making for a very large market. In the US, the TAM for ventilation, the process of breathing in and out, is estimated at US\$2bn. While the TAM for gas exchange, the actual diffusion of oxygen into the bloodstream, is estimated at US\$3bn.

Polarean has a five-pillar growth strategy focused on the leading academic medical hospitals in the US with a view to promoting conversion of clinical from research use, expanding awareness of the benefits of Xenon MRI scanning to promote take up in new hospitals, and removing impediments for use within the US hospital system (Figure 3). The company has recently announced FDA approval of its 3T Chest Coil for use with suitable GE HealthCare MRI scanners, broadening the use of its Xenon MRI scanning technology across all the major MRI vendors in the US, which now include GE, Philips, and Siemens.

Figure 3: 5-pillar growth strategy



Source: Polarean, CAG Research.

Polarean reported revenue for 2024 of US\$3,090k, up 247% YoY and above the top end of guidance, with an improved gross margin of 46.1% (2023 37.7%) resulting in a more than quadrupling in gross profit to US\$1,423k (2023 US\$335k). Operating costs were reduced across the board with a 21% reduction in the total to US\$10,173k (2023 US\$12,892k) driving an overall 28% reduction in the net loss to US\$8,540k (2023 US\$11,885k). The loss per share was reduced by 80% to US\$0.011, in part reflecting the US\$12.6m gross equity raise in June 2024.

The results came in 11% ahead of our forecast and resulted in an overall net cash burn US\$1.3m lower than we forecast at US\$5,681k resulting in a stronger year end net cash position than we forecast at US\$12.1m (YE23 US\$6.2m).

Polarean noted that in February of this year, the US National Institutes of Health announced a cap on indirect cost reimbursements of 15% for all new and existing research grants, a significant reduction from previously negotiated rates of typically 27%-28%. That has resulted in many academic centres reassessing internal budgets and delaying capital purchase decisions. Nevertheless, given its beefed up sales force and strong pipeline, Polarean remains confident in achieving its previously stated revenue range of US\$5.0m-US\$6.0m for 2025 as its Xenon MRI system expands beyond the research environment and into general hospital use.

Following a Type C meeting with the FDA in March 2025 to discuss the proposed design of the clinical trial to expand the XENOVIEW® label to include gas exchange indications and benefitting from a 230+ subject proof-of-concept study, Polarean now expects the trial to be significantly smaller and completed at an estimated cost of US\$4.0m-US\$4.5m, less than half the US\$9.0m-US\$11.0m previously estimated.

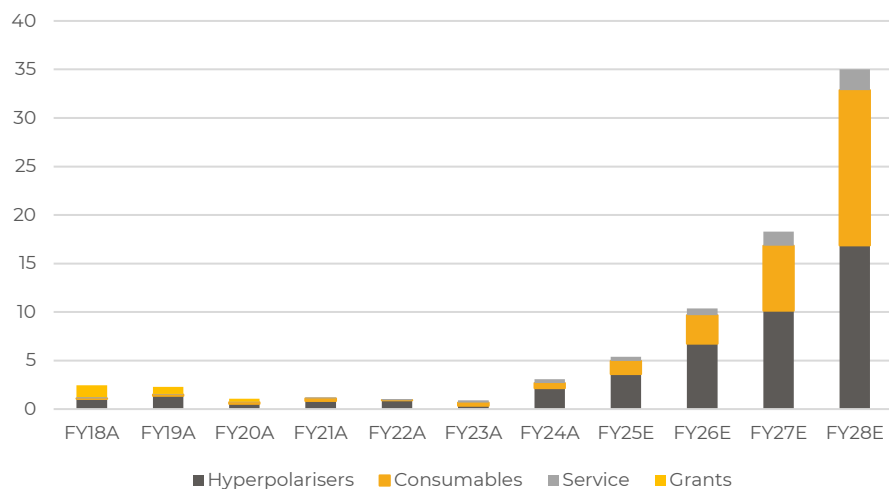
We have updated our forecasts to reflect 2024 actuals and removed US\$5.0m from our estimate of R&D and regulatory expense in 2026/27 to account for the reduced cost of the gas exchange related clinical trial. There is a minimal impact on our forecasts for 2025 but our forecast losses for 2026 and 2027 are lowered by 25% and 35%, respectively. In line with company guidance, we continue to see a need for further funding in 2026 albeit at a reduced level (see [Summary financial statements](#)).

2024 was an extremely busy year for Polarean most notably marked by the fund raise and the substantial beefing up of the sales force. The results came in better than we forecast and are suggestive that the company is indeed on the cusp of hyperbolic growth.

While the funding position for the company’s client hospitals and academic medical centres likely accounts for a reduced pace in orders for 1H25, the company remains confident that it can meet its previous guidance of US\$5.0m-US\$6.0m in revenue for 2025 with results weighted to the second half; our forecasts for FY25 are toward the bottom end of guidance.

Based on company guidance and assuming that FDA approval of XENOVIEW® for gas exchange is achieved by 2028, we forecast a hyperbolic increase in revenue and an important shift in the sales mix to the higher margin consumables associated with increased clinical utilisation (Figure 4).

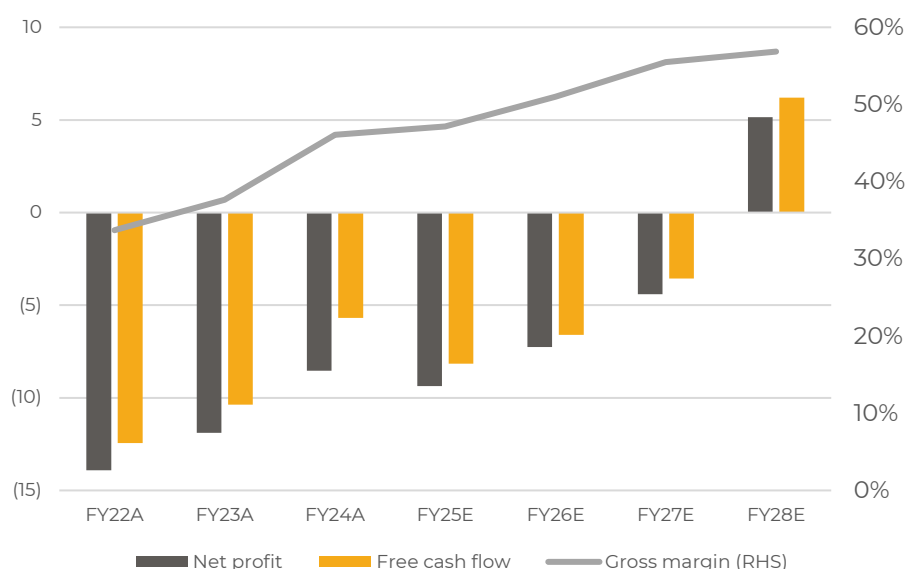
Figure 4: Revenue forecast (US\$m)



Source: Polarean, CAG Research.

That would still see Polarean crossing the bridge to profitability and free cash flow generation in 2028 (Figure 5) but with a significantly lower level of required funding as compared to our previous forecast.

Figure 5: Net profit, free cash flow (US\$m), and gross margin



Source: Polarean, CAG Research.

Our forecasts now indicate a peak level of net debt of US\$6.2m at the end of 2027, as compared to US\$12.1m previously, mainly reflecting the reduction in cost for the clinical trial for use in gas exchange and, to a lesser extent, the stronger 2024 year-end cash position than we had been carrying. That should make achieving the necessary funding considerably easier and therefore more certain.

Based on observable deal metrics we calculate an implied equity valuation for Polarean of up to US\$350m/£260m on a 10x multiple of FY28 estimated revenue, many times the current £12m market capitalisation which is so low, that we believe it could attract M&A interest (Figure 6).

Figure 6: Polarean valuation based on revenue multiple (US\$m)

Revenue multiple	FY25E	FY26E	FY27E	FY28E
2x	11	21	37	70
4x	22	42	73	140
6x	32	62	110	210
8x	43	83	146	280
10x	54	104	183	350

Source: Polarean, CAG Research.

That observable deal multiples-based approach to valuation is supported by our NPV analysis which indicates a valuation range of US\$114m-US\$233m, based on a ten-year forecast, which excludes potential sales outside North America (Figure 7).

Figure 7: NPV valuation (US\$m), and upside to current mkt cap

	5yr NPV	10yr NPV	Vs mkt cap	
			5yr NPV	10yr NPV
Systems value, 5 scans/week				
Unit value US\$500k, 30% margin	36	114	115%	586%
Unit value US\$500k, 40% margin	38	121	129%	631%
Unit value US\$500k, 50% margin	40	128	143%	675%
Unit value US\$675k, 30% margin	38	121	129%	633%
Unit value US\$675k, 40% margin	41	131	148%	693%
Unit value US\$675k, 50% margin	44	141	167%	753%
Systems value, 10 scans/week				
Unit value US\$500k, 30% margin	64	205	288%	1139%
Unit value US\$500k, 40% margin	67	213	302%	1184%
Unit value US\$500k, 50% margin	69	220	316%	1228%
Unit value US\$675k, 30% margin	67	213	303%	1186%
Unit value US\$675k, 40% margin	70	223	321%	1246%
Unit value US\$675k, 50% margin	73	233	340%	1306%

Source: Polarean, CAG Research.

Xenon MRI scanning provides unparalleled and safe functional lung imaging, meeting a large unmet clinical need that cannot be satisfied by other methods. Initial FDA approval and new reimbursement codes have already transformed the revenue outlook while Phase III approval for gas exchange would more than double the existing TAM and the anticipated trial cost has been halved.

If Polarean delivers to guidance, the current valuation is likely to look like an extremely low entry point in the rear-view mirror and is low enough to potentially attract take-over interest.

While the company will require additional funding to cross the bridge to profitability, there is a cash runway now extending to at least 2Q26 but with the additional funding requirement potentially halved as a result of the reduced cost of the gas exchange clinical trial.

The current share price indicates that investor confidence in Polarean is low. However, the fact remains that Polarean's XENOVIEW® system is a safe, unique technology that addresses unmet clinical need that cannot be satisfied by the current alternatives, and which has a combined TAM of US\$5bn in the US alone. Moreover, the existing FDA approval and reimbursement codes are already driving a transformation in revenue generation as hospitals shift from research to clinical use while the cost of a Phase III trial to unlock the full TAM opportunity has now been halved.

Summary financial statements

December year end, US\$k	FY23A	FY24A	FY25E	FY26E	FY27E	FY28E
P&L						
Revenue	891	3,090	5,378	10,388	18,276	34,999
Cost of sales	(555)	(1,667)	(2,843)	(5,091)	(8,131)	(15,100)
Gross profit	335	1,423	2,535	5,297	10,145	19,899
Administrative expense	(3,338)	(3,102)	(3,500)	(3,500)	(3,500)	(3,500)
R&D and regulatory expense	(4,194)	(3,441)	(4,000)	(5,000)	(5,000)	(5,000)
Depreciation	(209)	(255)	(200)	(50)	(50)	(50)
Amortisation	(728)	(710)	(700)	(100)	(100)	(100)
Selling & distrib'n expense	(3,562)	(1,951)	(3,000)	(3,200)	(5,000)	(5,000)
Share-based payments	(860)	(714)	(500)	(700)	(900)	(1,100)
Total operating cost	(12,892)	(10,173)	(11,900)	(12,550)	(14,550)	(14,750)
Operating profit/(loss)	(12,556)	(8,749)	(9,365)	(7,253)	(4,405)	5,149
Finance income	299	275	0	0	0	0
Finance expense	(16)	(16)	0	0	0	0
Other gains/(losses) - net	388	(49)	0	0	0	0
Profit/(loss) before tax	(11,885)	(8,540)	(9,365)	(7,253)	(4,405)	5,149
Income tax (charge)/credit	0	0	0	0	0	0
Net profit/(loss)	(11,885)	(8,540)	(9,365)	(7,253)	(4,405)	5,149
Basic reported EPS (US\$)	(0.055)	(0.011)	(0.008)	(0.006)	(0.004)	0.004
Diluted reported EPS (US\$)	(0.055)	(0.011)	(0.008)	(0.006)	(0.004)	0.004

Source: Polarean, CAG Research.

Summary financial statements (cont)

December year end, US\$k	FY23A	FY24A	FY25E	FY26E	FY27E	FY28E
Cash flow						
Profit/(loss) before tax	(11,885)	(8,540)	(9,365)	(7,253)	(4,405)	5,149
Depreciation	209	255	200	50	50	50
Amortisation	728	710	700	100	100	100
Share-based payments	860	714	500	700	900	1,100
FX on non cash items	(72)	49	0	0	0	0
Writeback of contingent consid'n	(316)	0	0	0	0	0
Net interest	(283)	(259)	0	0	0	0
Operating cash flow before WC	(10,759)	(7,070)	(7,965)	(6,403)	(3,355)	6,399
Delta working capital	324	1,463	0	0	0	0
Cash generated from operations	(10,435)	(5,608)	(7,965)	(6,403)	(3,355)	6,399
Tax received/(paid)	0	0	0	0	0	0
Net cash generated from operations	(10,435)	(5,608)	(7,965)	(6,403)	(3,355)	6,399
Purchase of PP&E	(79)	(198)	(50)	(50)	(50)	(50)
Interest received	299	275	0	0	0	0
Net cash invested	220	77	(50)	(50)	(50)	(50)
Proceeds from share issue	18	12,578	0	0	0	0
Share issue costs	0	(908)	0	0	0	0
Interest paid	(16)	(16)	0	0	0	0
Lease liability repayments	(142)	(134)	(150)	(150)	(150)	(150)
Net cash from financing	(140)	11,520	(150)	(150)	(150)	(150)
Implied delta net debt (IAS 17)	10,355	(5,989)	8,165	6,603	3,555	(6,199)
Summary balance sheet						
Total non-current assets	1,804	1,410	1,026	993	960	926
Net assets	8,298	12,143	3,277	(3,276)	(6,781)	(532)
Total equity	8,298	12,143	3,277	(3,276)	(6,781)	(532)
Net (cash)/debt (IAS 17)	(6,172)	(12,112)	(3,947)	2,656	6,212	13
Net (cash)/debt (IFRS 16)	(6,097)	(11,737)	(3,722)	2,731	6,136	(213)

Source: Polarean, CAG Research.

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