

Industry BlueBook

Diagnostics & Tools

June 2023

The industry's authoritative information resource for
valuations, M&A transactions, and Financings

DASHBOARD^{1,2,3,4,5}

EV MULTIPLES

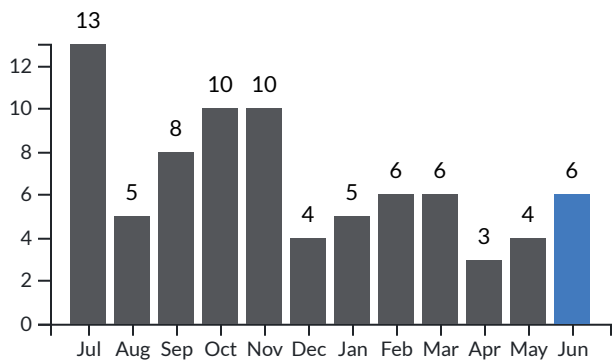
	REVENUE				EBITDA			
	LTM	%Δ	FTM	%Δ	LTM	%Δ	FTM	%Δ
In Vitro Diagnostics	3.6x	-10%	3.2x	-4%	16.7x	-9%	13.4x	2%
Diagnostic Services	2.8x	4%	2.4x	1%	13.4x	6%	11.5x	-2%
Life Science Tools	5.3x	13%	4.7x	6%	22.9x	-6%	19.7x	2%
In Vivo Diagnostics	4.1x	11%	3.7x	-2%	29.9x	0%	15.1x	0%

M&A DEALS & FINANCINGS

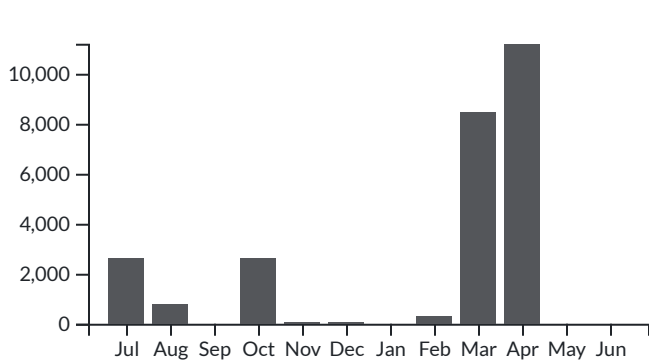
	DEAL COUNT				VOLUME (\$MM)			
	M&A	%Δ	FINANCINGS	%Δ	M&A	%Δ	FINANCINGS	%Δ
In Vitro Diagnostics	1	-50%	2	100%	0	NM	1	-96%
Diagnostic Services	3	300%	4	NM	4	NM	20	NM
Life Science Tools	1	-50%	5	25%	0	NM	72	203%
In Vivo Diagnostics	1	100%	4	-33%	0	NM	42	14%

- 1. Enterprise value (EV) equals equity market value (market capitalization) plus debt, plus preferred stock, minus cash and cash equivalents
- 2. Deals counted once in total if included in multiple segments
- 3. LTM = last twelve months; FTM = forward twelve months
- 4. %Δ – percent change month over month
- 5. NM – Not Meaningful

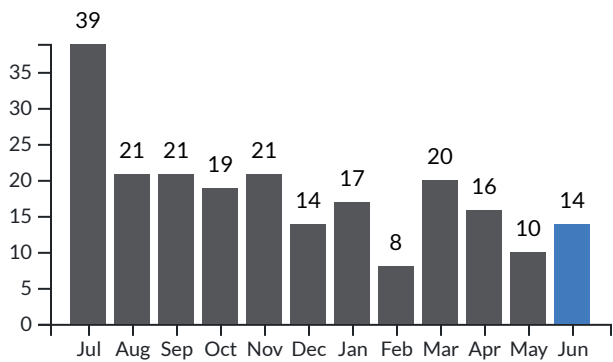
12 Month Deal Count M&A



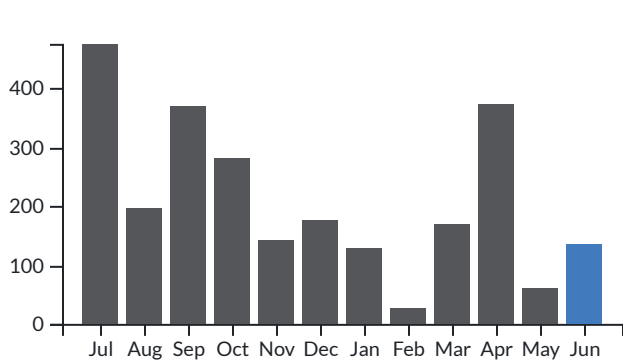
12 Month Volume M&A (\$MM)



12 Month Deal Count Financings

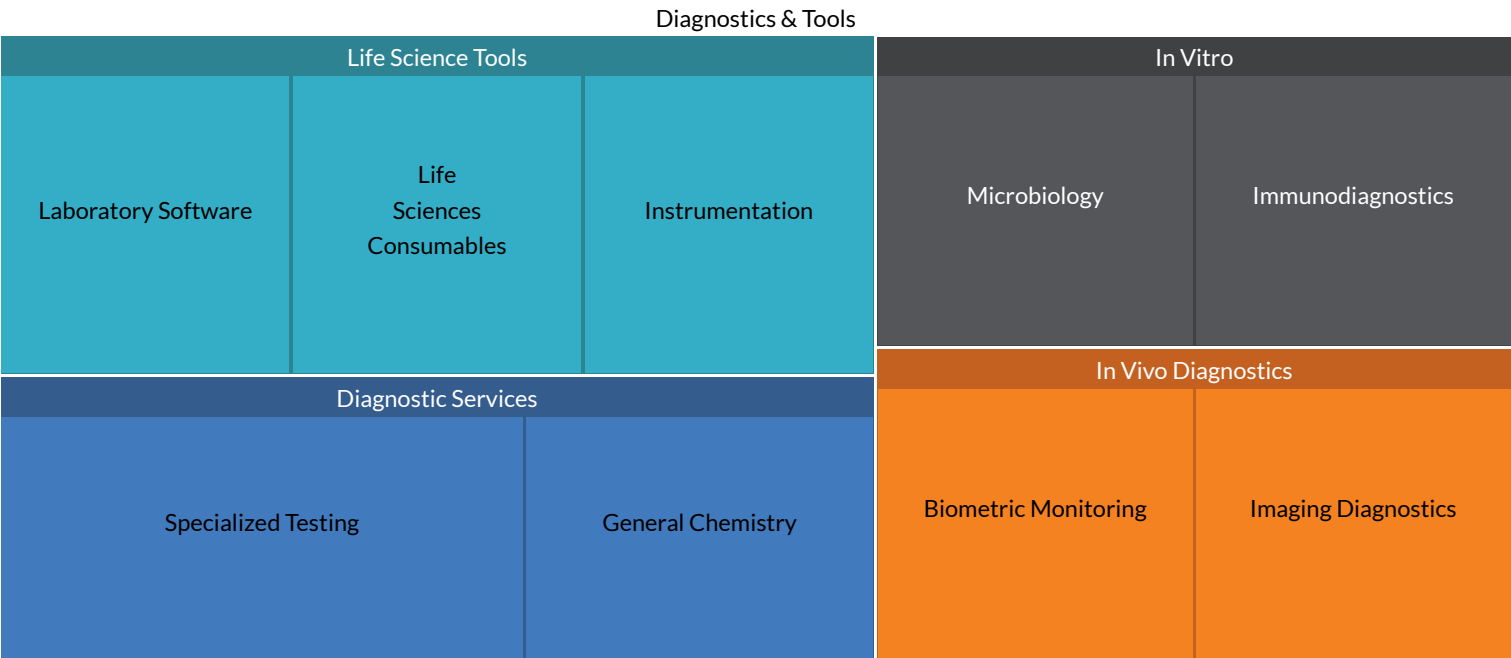


12 Month Volume Financings (\$MM)

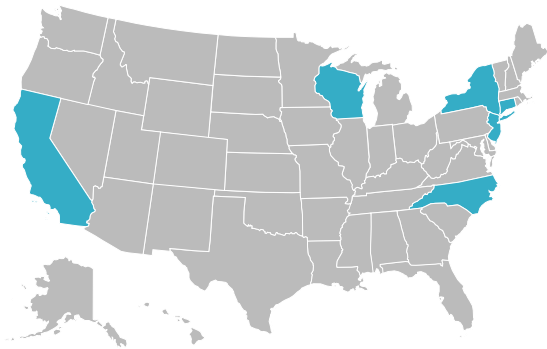


M&A ACTIVITY

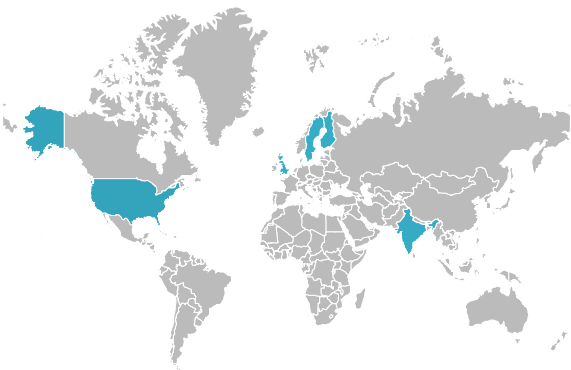
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY

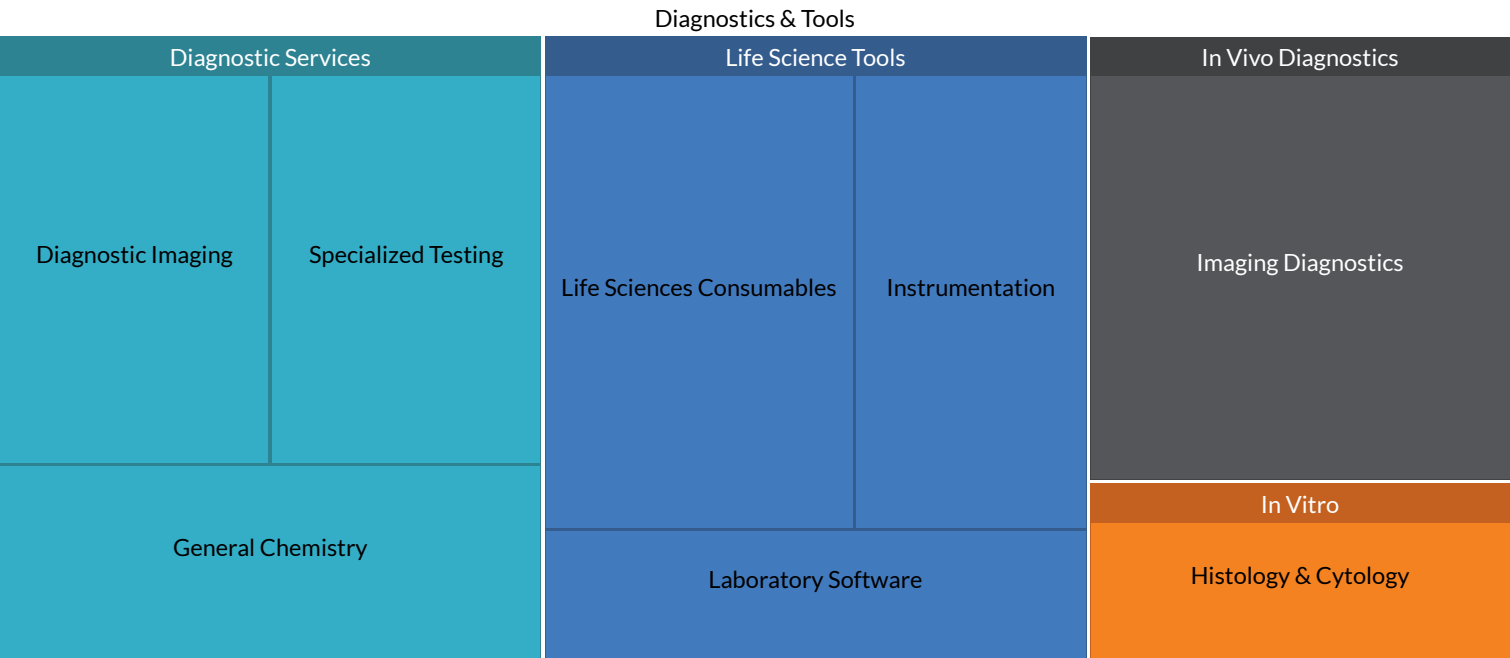


SELECTED TRANSACTIONS						
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
6/28/2023	Life Science Tools	Lab Software	Pattern Genomics, LLC	United States	Intus Biosciences, LLC	-
6/14/2023	Diagnostic Services	Specialized Testing General Chemistry	Symbion VIP Diagnostics Pathology Lab	India	Sterling Accuris Wellness Private Limited	-
6/13/2023	In Vivo Diagnostics	Biometric Monitoring Imaging Diagnostics	Neagen Oy	Finland	Vitec Software Group AB (publ) (OM:VIT B)	-
6/13/2023	Diagnostic Services	Specialized Testing	Yourgene Health Plc	United Kingdom	INEX INNOVATE	4.0

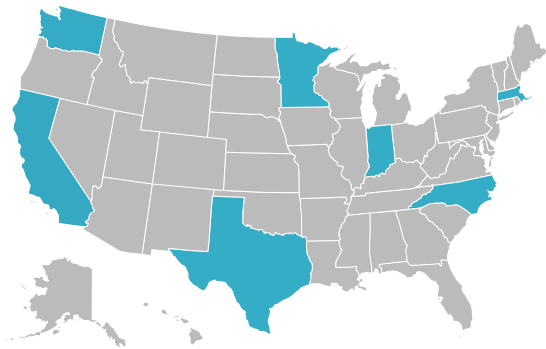
Announced Date Segment		Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
6/13/2023	In Vitro	Microbiology	Diagnostic International Distribution	-	Eurobio Scientific Société anonyme (ENXTPA:ALERS)	-
5/31/2023	Diagnostic Services	Specialized Testing	Access Medical Labs	United States	Grupo Diagnostico Aries	-

FINANCINGS

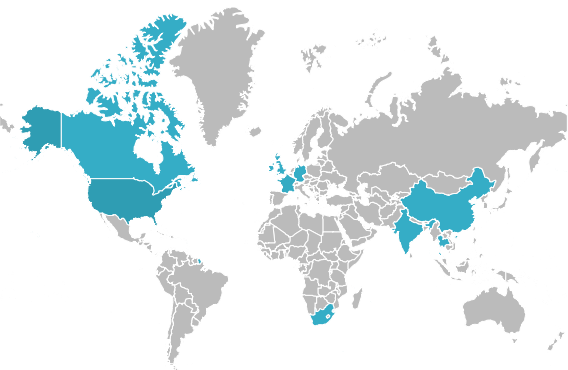
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY



SELECTED TRANSACTIONS						
Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
6/30/2023	Diagnostic Services	Diagnostic Imaging General Chemistry	Chiang Mai Ram Medical Business Public Company Limited (SET:CMR)	Thailand	Undisclosed	4.2
6/28/2023	In Vivo Diagnostics	Imaging Diagnostics	Gleamer SAS	France	Bpifrance Investissement SAS, Xange Private Equity, S.A., Elaia Partners, MUTUELLE D'ASSURANCES DU CORPS DE SANTE FRANÇAIS Société d'Assurance Mutuelle, UI Investissement, SAS, Supernova Invest, Crista Galli Ventures, heal.capital Management GmbH	29.5

Closed Date Segment		Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
6/27/2023	Life Science Tools	Lab Software	Flywheel Exchange Inc.	United States	Microsoft Corporation (NasdaqGS:MSFT), Beringea, LLC, Seraph Group, Gundersen Health System, Inc., Invenshure LLC, 8VC, iSelect Fund Management, LLC, Hewlett Packard Enterprise Company (NYSE:HPE), Novalis Capital Partners LLC, Great North Ventures, Intuitive Ventures, NVentures LLC	54.0
6/27/2023	Life Science Tools	Instrumentation	Astraveus SAS	France	Johnson & Johnson Innovation - JJDC, Inc., Bpifrance Investissement SAS, Merck Ventures B.V., Advent France Biotechnology SAS	18.1
6/20/2023	In Vivo Diagnostics	Imaging Diagnostics	Gradient Health, Inc.	United States	ReMY Investors & Consultants, LLC, Silicon Valley Social Venture Fund, VentureSouth, Supernode Ventures, Wavemaker Three-Sixty Health, Boro capital, MedMountain Ventures, LLC, AngelList Venture	2.8
6/20/2023	Life Science Tools	Consumables Instrumentation	Hooke Bio Ltd.	Ireland	European Innovation Council (EIC) Fund	-
6/15/2023	Diagnostic Services	Diagnostic Imaging	Leveljump Healthcare Corp. (TSXV:JUMP)	Canada	Undisclosed	0.7
6/14/2023	In Vitro	Histology & Cytology	Ikonisys S.A. (ENXTPA:ALIKO)	France	Cambria Equity Partners, L.P.	0.5
6/13/2023	In Vivo Diagnostics	Imaging Diagnostics	Curadel Surgical Innovations, Inc.	United States	Undisclosed	2.0
6/7/2023	In Vitro Life Science Tools	Molecular Consumables	ChromaCode, Inc.	United States	Global Brain Co., Ltd.	-
6/6/2023	Diagnostic Services	Specialized Testing General Chemistry	General Diagnostics International Pvt. Ltd.	India	InvAscent Capital Partners II, Ltd	10.5
6/5/2023	Life Science Tools	Consumables	Itm Isotopen Technologien MÜNchen Aktiengesellschaft	Germany	Temasek Holdings (Private) Limited, Eli Lilly and Company (NYSE:LLY), Impresa Management LLC, BlackRock Private Equity Partners, Inc., Carbyne	-
6/2/2023	Diagnostic Services	Specialized Testing	Fresh2 Group Limited (NasdaqCM:FRES)	China	Undisclosed	4.4
6/1/2023	In Vivo Diagnostics	Imaging Diagnostics	Hypervision Surgical Ltd.	United Kingdom	Redalpine Venture Partners AG, Heran Partners, Zeiss Ventures, LifeX Ventures	8.1

PUBLIC MARKETS¹

IN VITRO DIAGNOSTICS

Molecular Diagnostics

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Amoy Diagnostics Co., Ltd.	China	1,230	10.7x	8.2x	46.8x	29.6x
Biocartis Group NV	Belgium	142	2.2x	NM	NM	NM
Dx & Vx Co., Ltd.	Korea (Republic of)	195	7.2x	NM	NM	NM
Genomictree Inc.	Korea (Republic of)	173	39.2x	NM	NM	NM
Guangdong HybriBio Biotech Co.,Ltd.	Hong Kong	767	1.3x	NM	2.8x	NM
Qiagen N.V.	Netherlands	10,897	5.5x	5.2x	19.2x	14.9x
Sansure Biotech Inc.	China	594	0.8x	NM	2.8x	NM
Seegene, Inc.	Korea (Republic of)	416	1.1x	1.4x	15.6x	6.7x
Tellgen Corporation	China	388	4.1x	3.1x	17.9x	10.1x
Zhejiang Orient Gene Biotech Co., Ltd. (SHSE:688298)	China	159	0.3x	NM	NM	NM
Mean		1,496	7.2x	4.5x	17.5x	15.3x
Median		402	3.2x	4.2x	16.7x	12.5x

Microbiology

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Accelerate Diagnostics, Inc. (NasdaqCM:AXDX)	United States	164	13.0x	9.9x	NM	NM
bioMérieux S.A.	France	12,365	3.2x	3.1x	13.4x	13.4x
OraSure Technologies, Inc. (NasdaqGS:OSUR)	United States	267	0.6x	1.3x	4.9x	NM
QuidelOrtho Corporation	United States	7,901	2.5x	2.7x	8.6x	9.6x
Sansure Biotech Inc.	China	594	0.8x	NM	2.8x	NM
T2 Biosystems, Inc.	United States	51	3.0x	3.2x	NM	NM
Mean		3,557	3.8x	4.0x	7.4x	11.5x
Median		431	2.8x	3.1x	6.8x	11.5x

Histology & Cytology

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Guangzhou LBP Medicine Science & Technology Co., Ltd.	China	409	6.2x	NM	78.3x	NM
Mean		409	6.2x	NM	78.3x	NM
Median		409	6.2x	NM	78.3x	NM

Hematology & Coagulation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Beijing Succeder Technology Inc.	China	446	13.1x	NM	33.2x	NM
Sysmex Corporation	Japan	13,862	4.9x	4.4x	19.2x	17.1x
Mean		7,154	9.0x	4.4x	26.2x	17.1x
Median		7,154	9.0x	4.4x	26.2x	17.1x

DIAGNOSTIC SERVICES

Diagnostic Imaging

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Akumin Inc. (TSX:AKU)	United States	1,637	2.2x	2.1x	8.3x	10.2x
Centro de Imagem Diagnósticos S.A.	Brazil	828	3.6x	NM	45.0x	NM
Integral Diagnostics Limited (ASX:IDX)	Australia	727	2.8x	2.4x	14.5x	11.6x
Medica Group Plc (LSE:MGP)	United Kingdom	330	3.4x	3.0x	20.4x	14.1x
RadNet, Inc. (NasdaqGM:RDNT)	United States	3,812	2.6x	2.4x	12.3x	16.9x
Mean		1,467	2.9x	2.5x	20.1x	13.2x
Median		828	2.8x	2.4x	14.5x	12.8x

Specialized Testing

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Adaptive Biotechnologies Corporation	United States	760	4.1x	3.5x	NM	NM
BGI Genomics Co., Ltd.	China	2,564	2.8x	NM	20.1x	NM
Burning Rock Biotech Limited	China	111	1.3x	1.1x	NM	NM
CareDx, Inc (NasdaqGM:CDNA)	United States	209	0.7x	0.8x	NM	NM
Castle Biosciences, Inc. (NasdaqGM:CSTL)	United States	147	1.0x	0.9x	NM	NM
Dx & Vx Co., Ltd.	Korea (Republic of)	195	7.2x	NM	NM	NM
Exact Sciences Corporation	United States	18,823	8.6x	7.6x	NM	NM
Fulgent Genetics, Inc. (NasdaqGM:FLGT)	United States	268	0.7x	1.0x	39.0x	NM
Genetron Holdings Limited	China	59	0.6x	NM	NM	NM
Guardant Health, Inc.	United States	4,623	9.6x	8.2x	NM	NM
Invitae Corporation	United States	1,536	3.0x	3.0x	NM	NM
MDxHealth SA	Belgium	82	1.8x	1.2x	NM	NM
Myriad Genetics, Inc. (NasdaqGS:MYGN)	United States	1,943	2.8x	2.6x	NM	NM
Natera, Inc.	United States	5,195	6.0x	4.9x	NM	NM
NeoGenomics, Inc.	United States	2,243	4.2x	3.9x	NM	NM
Progenity, Inc. (NasdaqGM:PROG)	United States	152	NM	NM	NM	NM
Veracyte, Inc.	United States	1,681	5.4x	4.9x	NM	NM
Mean		2,388	3.7x	3.4x	29.5x	NM
Median		760	2.9x	3.0x	29.5x	NM

General Chemistry

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Diagnósticos da América S.A. (BOVESPA:DASA3)	Brazil	4,494	1.6x	1.5x	11.0x	7.8x
Dr. Lal PathLabs Limited (NSEI:LALPATHLAB)	India	2,236	9.1x	8.1x	37.5x	32.4x
Guangzhou Kingmed Diagnostics Group Co., Ltd.	China	4,569	2.5x	3.2x	11.5x	16.0x
H.U. Group Holdings, Inc.	Japan	1,311	0.7x	0.8x	4.6x	5.6x
Integrated Diagnostics Holdings plc	Jersey	315	2.9x	2.3x	10.8x	6.5x
Laboratory Corporation of America Holdings	United States	27,366	1.9x	2.1x	10.6x	NM
Medicover AB (publ) (OM:MCOV B)	Sweden	3,219	2.0x	1.6x	15.9x	11.5x
Metropolis Healthcare Limited (NSEI:METROPOLIS)	India	952	6.8x	6.3x	27.1x	24.9x

Quest Diagnostics Incorporated	United States	20,306	2.1x	2.2x	9.4x	11.2x
Sonic Healthcare Limited	Australia	12,787	2.2x	2.3x	8.9x	10.6x
Thyrocare Technologies Limited	India	319	5.0x	4.2x	21.6x	17.4x
Mean		7,079	3.3x	3.2x	15.3x	14.4x
Median		3,219	2.2x	2.3x	11.0x	11.4x

LIFE SCIENCE TOOLS

Laboratory Software

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Precigen, Inc. (NasdaqGS:PGEN)	United States	211	9.1x	25.9x	NM	NM
Schrödinger, Inc.	United States	3,159	16.0x	13.8x	NM	NM
Simulations Plus, Inc.	United States	752	13.8x	11.7x	56.4x	33.0x
SyntekaBio, Inc.	Korea (Republic of)	113	NM	NM	NM	NM
Mean		1,059	13.0x	17.1x	56.4x	33.0x
Median		482	13.8x	13.8x	56.4x	33.0x

Life Sciences Consumables

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Abcam plc	United Kingdom	5,777	13.3x	10.6x	49.1x	27.4x
Abnova (Taiwan) Corporation	Taiwan (Province of China)	58	4.4x	NM	19.7x	NM
Adaptive Biotechnologies Corporation	United States	760	4.1x	3.5x	NM	NM
Avantor, Inc.	United States	19,614	2.7x	2.6x	13.0x	12.8x
Bio-Techne Corporation	United States	13,168	11.7x	10.5x	36.3x	26.4x
Bioneer Corporation	Korea (Republic of)	920	5.7x	NM	NM	NM
Borosil Limited (BSE:543212)	India	585	4.7x	NM	38.0x	NM
Cellectis S.A.	France	105	4.1x	4.4x	NM	NM
Genscript Biotech Corporation	China	4,305	6.9x	5.0x	NM	NM
Guangzhou Jet Bio-Filtration Co., Ltd.	China	319	4.7x	4.2x	26.7x	25.1x
Guerbet SA (ENXTPA:GBT)	France	529	0.6x	0.6x	4.9x	4.9x
NKMAX CO., Ltd.	Korea (Republic of)	476	58.5x	NM	NM	NM
Porton Pharma Solutions Ltd.	China	2,067	2.2x	4.0x	6.3x	10.7x
Qiagen N.V.	Netherlands	10,897	5.5x	5.2x	19.2x	14.9x
Repligen Corporation (NasdaqGS:RGEN)	United States	7,679	9.9x	10.2x	29.5x	39.0x
Twist Bioscience Corporation	United States	873	3.8x	3.4x	NM	NM
Vitrolife AB (publ)	Sweden	2,771	9.0x	8.0x	28.4x	23.5x
Viva Biotech Holdings (SEHK:1873)	China	675	2.0x	1.9x	10.4x	10.0x
Mean		3,977	8.5x	5.3x	23.5x	19.5x
Median		897	4.7x	4.3x	23.2x	19.2x

Instrumentation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
10x Genomics, Inc.	United States	6,172	11.5x	9.9x	NM	NM
AnHui Wanyi Science and Technology Co., Ltd.	China	410	4.3x	2.9x	NM	19.7x

Biotage AB (publ) (OM:BIOT)	Sweden	976	6.8x	5.7x	29.4x	25.0x
Bruker Corporation	United States	11,504	4.4x	4.0x	19.2x	18.5x
Cytek Biosciences, Inc. (NasdaqGS:CTKB)	United States	877	5.3x	3.8x	NM	19.3x
Harvard Bioscience, Inc.	United States	279	2.4x	2.3x	36.4x	14.0x
Illumina, Inc.	United States	31,177	7.0x	6.0x	64.5x	50.5x
Mettler-Toledo International Inc.	United States	30,916	7.8x	7.4x	24.1x	22.2x
NanoString Technologies, Inc.	United States	287	2.2x	1.5x	NM	NM
Pacific Biosciences of California, Inc.	United States	3,395	25.3x	17.6x	NM	NM
PhenomeX Inc.	United States	96	1.3x	1.1x	NM	NM
Quanterix Corporation (NasdaqGM:QTRX)	United States	558	5.4x	5.1x	NM	NM
Standard BioTools Inc.	United States	410	4.3x	NM	NM	NM
Waters Corporation	United States	16,822	5.7x	5.2x	16.5x	14.9x
Mean		7,420	6.7x	5.6x	31.7x	23.0x
Median		927	5.3x	5.1x	26.8x	19.5x

Lab/Biobank Equipment

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
BICO Group AB (publ)	Sweden	352	1.5x	1.5x	NM	21.5x
Sartorius Aktiengesellschaft	Germany	24,842	5.6x	5.9x	17.0x	19.1x
Stratec SE	Germany	905	3.2x	2.7x	18.3x	12.7x
Tecan Group Ltd. (SWX:TECN)	Switzerland	4,919	3.9x	3.8x	21.7x	19.7x
Mean		7,755	3.5x	3.5x	19.0x	18.3x
Median		2,912	3.5x	3.2x	18.3x	19.4x

IN VIVO DIAGNOSTICS

Biometric Monitoring

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Biotricity, Inc.	United States	57	5.9x	4.2x	NM	NM
Contec Medical Systems Co.,Ltd	China	1,302	10.5x	NM	40.6x	NM
Guangdong Transtek Medical Electronics Co., Ltd	China	223	1.7x	NM	NM	NM
iRhythm Technologies, Inc.	United States	3,133	7.3x	6.3x	NM	NM
TaiDoc Technology Corporation	Taiwan (Province of China)	428	1.4x	2.8x	3.3x	9.4x
Zhejiang Starry Pharmaceutical Co.,Ltd. (SHSE:603520)	China	1,097	3.7x	3.3x	33.3x	13.8x
Mean		1,040	5.1x	4.1x	25.7x	11.6x
Median		763	4.8x	3.7x	33.3x	11.6x

Imaging Diagnostics

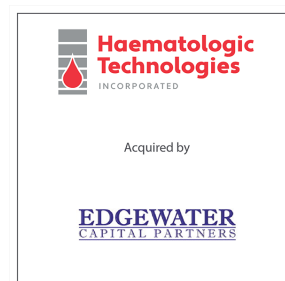
Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
4DMedical Limited	Australia	127	NM	19.6x	NM	NM
Detection Technology Oyj	Finland	216	2.0x	1.7x	23.5x	10.3x

iRay Technology Company Limited	China	3,761	16.4x	12.3x	46.5x	29.1x
Kromek Group plc	United Kingdom	54	3.0x	2.2x	NM	NM
Nano-X Imaging Ltd. (NasdaqGM:NNOX)	Israel	768	83.4x	41.5x	NM	NM
Perimeter Medical Imaging AI, Inc.	Canada	70	NM	70.8x	NM	NM
Ray Co., Ltd.	Korea (Republic of)	455	4.6x	3.3x	29.9x	16.9x
Siemens Healthineers AG	Germany	79,718	3.4x	3.3x	21.6x	16.3x
SonoScape Medical Corp.	China	3,021	11.8x	8.8x	48.6x	31.6x
Varex Imaging Corporation (NasdaqGS:VREX)	United States	1,325	1.5x	1.5x	11.8x	9.3x
Mean		8,952	15.7x	16.5x	30.3x	18.9x
Median		612	4.0x	6.0x	26.7x	16.6x

1. NM - Not Meaningful

RECENT CROSSTREE TRANSACTIONS

Crosstree Capital Partners provides mergers and acquisitions and financing advisory services exclusively to leading Health Sciences companies. Since inception, the firm has been a consistent leader within our focus areas, closing more than 100 successful transactions with companies ranging from private equity-backed consolidators to Fortune 500 publicly-traded companies. In the process, we have represented clients on five continents, and roughly 35% of our transactions have been cross-border.



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