

Industry BlueBook

Diagnostics & Tools

February 2023

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

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

EV MULTIPLES

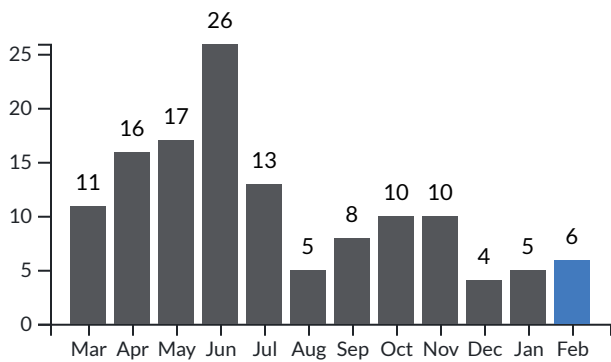
	REVENUE				EBITDA			
	LTM	%Δ	FTM	%Δ	LTM	%Δ	FTM	%Δ
In Vitro Diagnostics	3.7x	-1%	3.1x	-12%	15.3x	2%	13.5x	-7%
Diagnostic Services	2.6x	2%	2.3x	2%	9.6x	-5%	10.7x	0%
Life Science Tools	4.8x	-6%	4.6x	-12%	26.0x	-1%	19.9x	1%
In Vivo Diagnostics	4.3x	0%	3.1x	-17%	26.8x	10%	13.6x	-13%

M&A DEALS & FINANCINGS

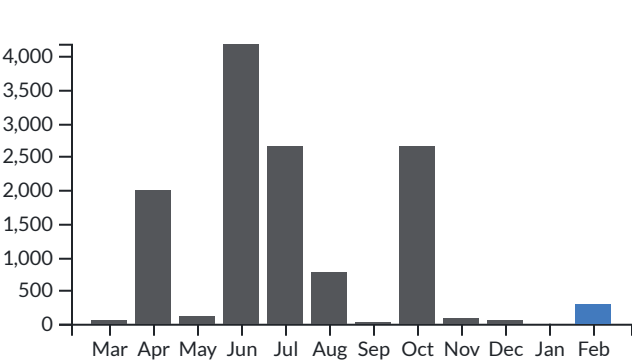
	DEAL COUNT				VOLUME (\$MM)			
	M&A	%Δ	FINANCINGS	%Δ	M&A	%Δ	FINANCINGS	%Δ
In Vitro Diagnostics	0	NM	1	-67%	0	NM	3	-41%
Diagnostic Services	2	100%	2	0%	0	NM	12	550%
Life Science Tools	1	-67%	1	-75%	235	100%	1	-98%
In Vivo Diagnostics	3	50%	5	-29%	50	100%	14	-75%

- 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

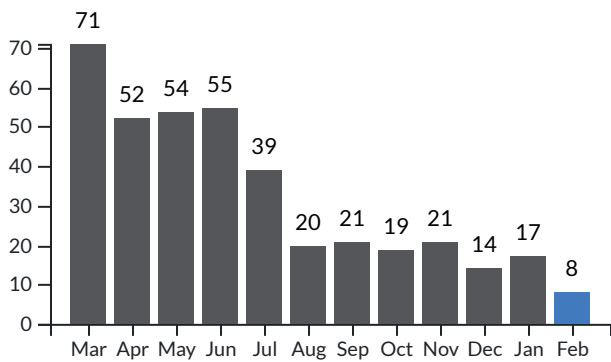
12 Month Deal Count M&A



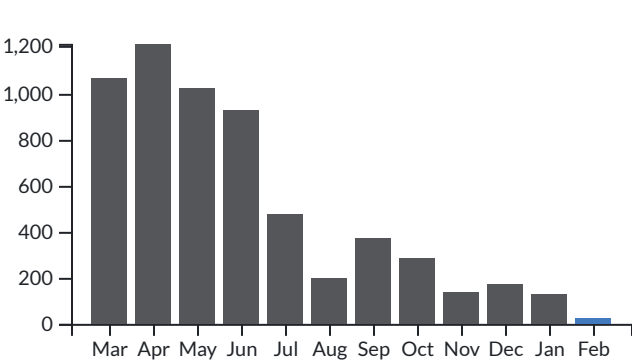
12 Month Volume M&A (\$MM)



12 Month Deal Count Financings

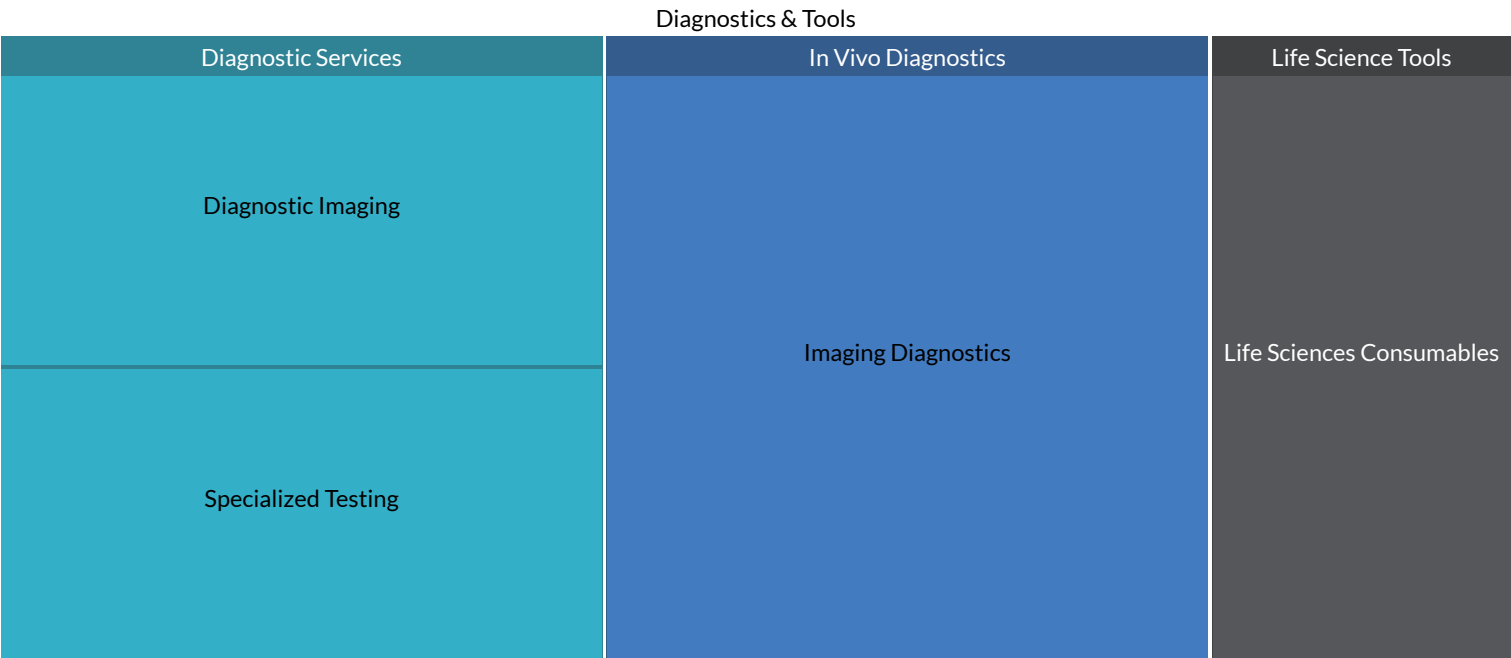


12 Month Volume Financings (\$MM)

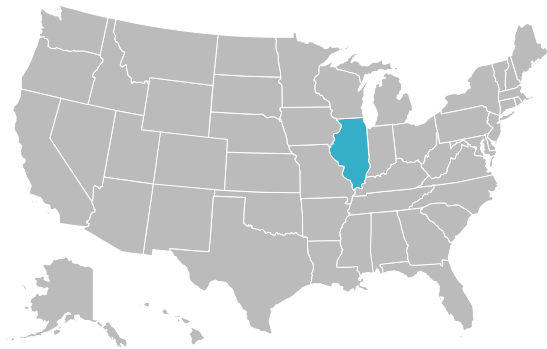


M&A ACTIVITY

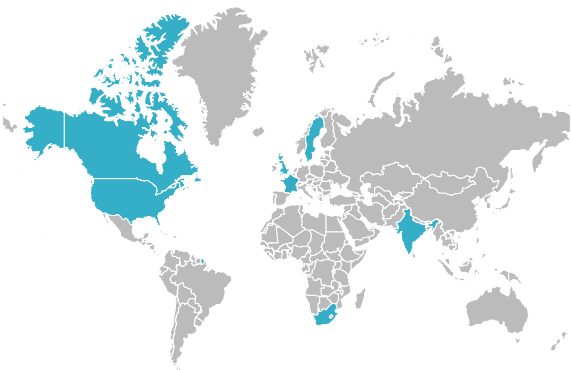
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY

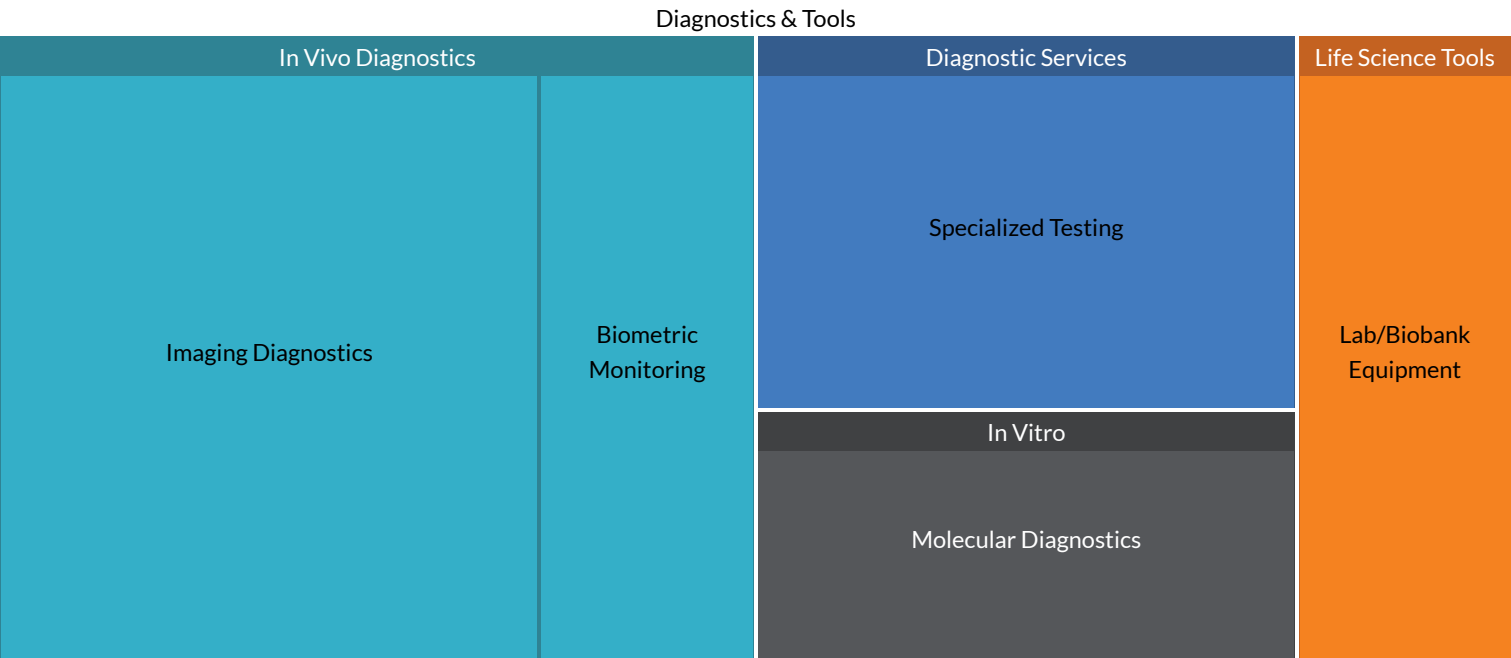


SELECTED TRANSACTIONS						
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
2/22/2023	In Vivo Diagnostics	Imaging Diagnostics	Intrasense SA	France	Guerbet SA (ENXTPA:GBT)	16.8
2/18/2023	In Vivo Diagnostics	Imaging Diagnostics	Remidio Innovative Solutions Pvt. Ltd.	India	Sun Pharmaceutical Industries Limited (NSEI:SUNPHARMA)	18.1
2/15/2023	Life Science Tools	Consumables	ProMetic BioSciences Ltd.	United Kingdom	Biotage AB (publ) (OM:BIOT)	235.0
2/14/2023	Diagnostic Services	Diagnostic Imaging	The Ultrasound Centre	Canada	Canada Diagnostic Centres	-

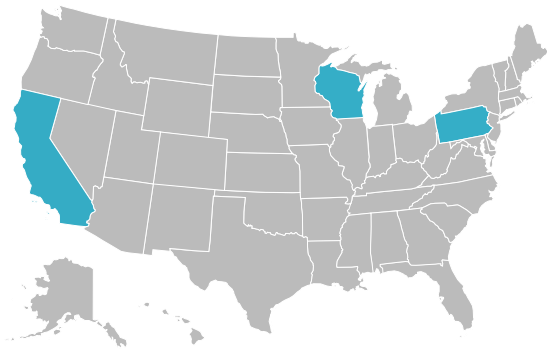
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
2/14/2023	In Vivo Diagnostics	Imaging Diagnostics	X-Ray Cassette Repair Company, Inc.	United States	ADDvise Group AB (publ) (OM:ADDV A)	14.8
2/1/2023	Diagnostic Services	Specialized Testing	Artisan Biomed	South Africa	Mediclinic Southern Africa (Pty) Ltd	-

FINANCINGS

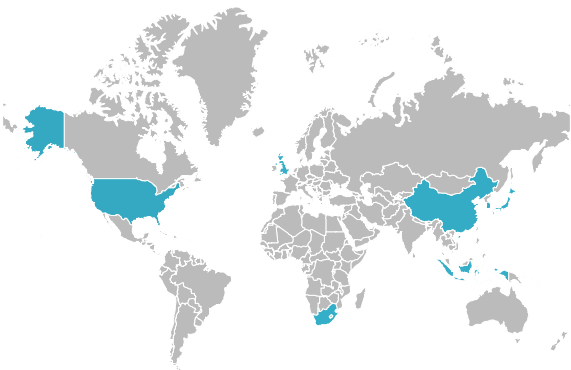
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY



SELECTED TRANSACTIONS						
Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
2/24/2023	In Vivo Diagnostics	Imaging Diagnostics	Envisionit Deep AI (Pty) Ltd.	South Africa	RMB Capital Partners, New Gx Capital, Global Innovation Initiative Group, Investment Arm	1.7
2/21/2023	Life Science Tools	Lab/Biobank Equipment	Huiguan Biotech	China	Shenzhen Decent Investment Co., Ltd.	1.5
2/20/2023	In Vitro Diagnostic Services	Molecular Specialized Testing	MCBI, Inc.	Japan	Kaga Electronics Co.,Ltd. (TSE:8154), Green Core Co., Ltd.	3.4
2/15/2023	In Vivo Diagnostics	Imaging Diagnostics	NexEos Diagnostics, Inc.	United States	Undisclosed	5.1

Closed Date Segment		Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
2/9/2023	Diagnostic Services	Specialized Testing	Asa Ren Pte Ltd.	Indonesia	Northstar Advisors Pte. Ltd, Kejora Ventures, Naya Capital Management UK Limited, Marcy Venture Partners LLP, PT Diagnos Laboratorium Utama Tbk (IDX:DGNS), Top Harvest Capital	8.2
2/8/2023	In Vivo Diagnostics	Imaging Diagnostics	Avicenna Ltd.	United Kingdom	Innovacom Gestion, Cemag Invest	7.5
2/7/2023	In Vivo Diagnostics	Biometric Monitoring	Aba Inc.	United States	Sintokogio, Ltd. (TSE:6339), SMBC Venture Capital Co., Ltd., Mistletoe Japan, Inc., ABC Dream Ventures, Inc., i-nest capital Co., Ltd., Sony Ventures Corporation, Hakuhodo DY Ventures Inc., Innovation Growth Ventures Co., Ltd., Ikemori Venture Support LLC, i-nest capital Co., Ltd., Spiral Innovation Partners LLP	-
2/7/2023	In Vivo Diagnostics	Imaging Diagnostics	Shenzhen InnerMedical Medical Technology Co., Ltd.	China	Midas Capital	-

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	1,610	12.8x	12.9x	58.2x	31.5x
Biocartis Group NV	Belgium	159	2.6x	NM	NM	NM
Genomictree Inc.	Korea (Republic of)	122	5.2x	NM	22.8x	NM
Guangdong HybriBio Biotech Co.,Ltd.	Hong Kong	1,044	1.5x	1.3x	3.1x	NM
Qiagen N.V.	Netherlands	10,907	5.1x	5.3x	13.8x	14.4x
Sansure Biotech Inc.	China	1,218	1.3x	NM	3.4x	NM
Seegene, Inc.	Korea (Republic of)	563	0.7x	1.7x	1.8x	6.4x
Tellgen Corporation	China	479	4.6x	4.1x	20.7x	13.9x
Zhejiang Orient Gene Biotech Co., Ltd. (SHSE:688298)	China	773	0.6x	NM	1.5x	NM
Mean		1,875	3.8x	5.1x	15.7x	16.6x
Median		773	2.6x	4.1x	8.6x	14.2x

Microbiology

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Accelerate Diagnostics, Inc.	United States	72	5.5x	4.7x	NM	NM
bioMérieux S.A.	France	11,773	3.2x	3.1x	11.4x	13.1x
OraSure Technologies, Inc. (NasdaqGS:OSUR)	United States	358	0.9x	1.0x	33.3x	10.7x
QuidelOrtho Corporation	United States	8,251	2.5x	2.8x	6.3x	9.9x
Sansure Biotech Inc.	China	1,218	1.3x	NM	3.4x	NM
T2 Biosystems, Inc.	United States	51	2.1x	2.0x	NM	NM
Mean		3,621	2.6x	2.7x	13.6x	11.3x
Median		788	2.3x	2.8x	8.9x	10.7x

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	317	4.3x	NM	47.1x	NM
Mean		317	4.3x	NM	47.1x	NM
Median		317	4.3x	NM	47.1x	NM

Hematology & Coagulation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Beijing Succeder Technology Inc.	China	425	12.9x	NM	24.0x	NM
Quotient Limited	Switzerland	285	7.6x	NM	NM	NM
Sysmex Corporation	Japan	12,298	4.2x	3.8x	16.8x	14.9x
Mean		4,336	8.2x	3.8x	20.4x	14.9x
Median		425	7.6x	3.8x	20.4x	14.9x

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	1,736	2.3x	2.3x	10.2x	10.4x
Centro de Imagem Diagnósticos S.A.	Brazil	657	3.2x	NM	33.6x	NM
Integral Diagnostics Limited (ASX:IDX)	Australia	654	2.5x	2.1x	12.9x	10.3x
Medica Group Plc (LSE:MGP)	United Kingdom	238	2.8x	2.6x	13.4x	12.3x
RadNet, Inc. (NasdaqGM:RDNT)	United States	2,842	2.1x	2.0x	9.6x	13.5x
Mean		1,225	2.5x	2.2x	15.9x	11.6x
Median		657	2.5x	2.2x	12.9x	11.3x
Specialized Testing						
Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Adaptive Biotechnologies Corporation	United States	834	4.5x	4.0x	NM	NM
BGI Genomics Co., Ltd.	China	2,334	2.6x	NM	13.6x	NM
BioNexus Gene Lab Corporation	Malaysia	88	7.8x	NM	NM	NM
Burning Rock Biotech Limited	China	210	2.6x	2.3x	NM	NM
CareDx, Inc (NasdaqGM:CDNA)	United States	649	2.0x	2.0x	NM	NM
Castle Biosciences, Inc. (NasdaqGM:CSTL)	United States	424	3.1x	2.5x	NM	NM
Exact Sciences Corporation (NasdaqCM:EXAS)	United States	12,934	6.2x	5.6x	NM	NM
Fulgent Genetics, Inc.	United States	157	0.3x	0.6x	0.7x	NM
Guardant Health, Inc.	United States	3,529	7.9x	6.6x	NM	NM
Invitae Corporation	United States	1,733	3.4x	3.3x	NM	NM
MDxHealth SA	Belgium	115	3.5x	2.0x	NM	NM
Myriad Genetics, Inc. (NasdaqGS:MYGN)	United States	1,512	2.2x	2.1x	NM	NM
Natera, Inc.	United States	4,942	6.0x	5.0x	NM	NM
NeoGenomics, Inc.	United States	2,321	4.6x	4.2x	NM	NM
Progenity, Inc. (NasdaqGM:PROG)	United States	122	NM	NM	NM	NM
GeneDx Holdings Corp.	United States	295	1.3x	1.3x	NM	NM
Veracyte, Inc.	United States	1,602	5.4x	4.9x	NM	NM
Mean		1,988	4.0x	3.3x	7.1x	NM
Median		834	3.4x	2.9x	7.1x	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	3,202	1.3x	1.2x	9.5x	6.3x
Dr. Lal PathLabs Limited (NSEI:LALPATHLAB)	India	1,971	8.1x	7.2x	34.9x	28.5x
Guangzhou Kingmed Diagnostics Group Co., Ltd.	China	5,400	2.4x	3.1x	9.3x	11.3x
H.U. Group Holdings, Inc.	Japan	1,313	0.7x	0.7x	3.3x	4.3x
Instituto Hermes Pardini S.A.	Brazil	570	1.4x	1.4x	7.6x	6.2x
Integrated Diagnostics Holdings plc	Jersey	336	1.5x	2.6x	4.4x	7.1x
LabCorp	United States	27,147	1.8x	1.8x	9.2x	10.5x
Medicover AB (publ) (OM:MCOV B)	Sweden	3,640	2.3x	2.0x	14.8x	14.1x

Metropolis Healthcare Limited (NSEI:METROPOLIS)	India	833	5.9x	5.7x	25.5x	21.2x
Quest Diagnostics Incorporated	United States	19,916	2.0x	2.2x	8.4x	11.0x
Sonic Healthcare Limited	Australia	12,131	2.1x	2.2x	8.3x	9.9x
Thyrocare Technologies Limited	India	277	4.4x	3.8x	18.6x	14.5x
Mean		6,395	2.8x	2.8x	12.8x	12.1x
Median		2,587	2.0x	2.2x	9.3x	10.7x

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	336	2.8x	13.2x	NM	NM
Schrödinger, Inc.	United States	1,219	6.7x	4.6x	NM	NM
Simulations Plus, Inc.	United States	643	12.0x	10.3x	43.3x	31.9x
SyntekaBio, Inc.	Korea (Republic of)	74	NM	NM	NM	NM
Mean		568	7.2x	9.4x	43.3x	31.9x
Median		490	6.7x	10.3x	43.3x	31.9x

Life Sciences Consumables

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Abcam plc	United Kingdom	3,445	8.1x	6.9x	32.6x	21.3x
Abnova (Taiwan) Corporation	Taiwan (Province of China)	63	4.8x	NM	29.2x	NM
Adaptive Biotechnologies Corporation	United States	834	4.5x	4.0x	NM	NM
Avantor, Inc.	United States	22,447	3.0x	3.0x	14.0x	14.2x
Bio-Techne Corporation	United States	11,517	10.3x	9.4x	31.1x	23.9x
Bioneer Corporation	Korea (Republic of)	1,008	5.9x	4.4x	46.9x	NM
Borosil Limited (BSE:543212)	India	442	3.7x	NM	27.9x	NM
Cellectis S.A.	France	107	4.5x	2.2x	NM	NM
Genscript Biotech Corporation	China	5,159	8.8x	7.2x	NM	NM
Guangzhou Jet Bio-Filtration Co., Ltd.	China	484	4.8x	3.4x	18.2x	NM
Guerbet SA (ENXTPA:GBT)	France	526	0.7x	0.6x	7.1x	4.8x
NKMAX CO., Ltd.	Korea (Republic of)	404	45.5x	NM	NM	NM
Porton Pharma Solutions Ltd.	China	3,275	3.6x	3.1x	10.8x	10.1x
Qiagen N.V.	Netherlands	10,907	5.1x	5.3x	13.8x	14.4x
Repligen Corporation (NasdaqGS:RGEN)	United States	9,488	11.8x	12.1x	34.0x	43.7x
Twist Bioscience Corporation	United States	762	3.5x	2.7x	NM	NM
Vitrolife AB (publ)	Sweden	2,896	9.3x	8.3x	28.8x	24.4x
Viva Biotech Holdings	China	697	2.1x	NM	12.8x	NM
Mean		4,137	7.8x	5.2x	23.6x	19.6x
Median		921	4.8x	4.2x	27.9x	17.9x

Instrumentation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
10x Genomics, Inc.	United States	5,147	10.0x	8.7x	NM	NM

AnHui Wanyi Science and Technology Co., Ltd.	China	574	5.9x	NM	81.4x	NM
Biotage AB (publ) (OM:BIOT)	Sweden	940	6.3x	5.2x	23.8x	20.9x
Bruker Corporation	United States	10,717	4.2x	3.8x	20.5x	17.5x
Harvard Bioscience, Inc.	United States	170	1.4x	1.5x	32.6x	12.1x
Illumina, Inc.	United States	32,992	7.2x	6.7x	49.6x	54.6x
Mettler-Toledo International Inc.	United States	33,729	8.6x	8.2x	26.8x	24.8x
NanoString Technologies, Inc.	United States	511	4.0x	2.9x	NM	NM
Pacific Biosciences of California, Inc.	United States	2,422	18.9x	14.0x	NM	NM
Quanterix Corporation (NasdaqGM:QTRX)	United States	107	1.0x	1.0x	NM	NM
Standard BioTools Inc.	United States	392	4.0x	NM	NM	NM
Waters Corporation	United States	19,512	6.6x	6.2x	18.6x	17.7x
Mean		8,934	6.5x	5.8x	36.2x	24.6x
Median		1,681	6.1x	5.7x	26.8x	19.3x

Lab/Biobank Equipment

Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
BICO Group AB (publ)	Sweden	550	2.4x	2.5x	NM	NM
Sartorius Aktiengesellschaft	Germany	29,602	6.7x	6.4x	19.5x	18.9x
Stratec SE	Germany	1,036	3.6x	3.3x	17.6x	13.7x
Tecan Group Ltd. (SWX:TECN)	Switzerland	5,238	4.6x	4.3x	25.1x	21.4x
Mean		9,107	4.3x	4.1x	20.8x	18.0x
Median		3,137	4.1x	3.8x	19.5x	18.9x

IN VIVO DIAGNOSTICS

Biometric Monitoring

Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
Biotricity, Inc.	United States	55	6.1x	3.0x	NM	NM
Contec Medical Systems Co.,Ltd	China	1,510	16.1x	NM	89.0x	NM
Guangdong Transtek Medical Electronics Co., Ltd	China	294	1.5x	NM	NM	NM
iRhythm Technologies, Inc.	United States	3,474	8.5x	7.2x	NM	NM
TaiDoc Technology Corporation	Taiwan (Province of China)	493	1.7x	2.3x	3.7x	5.9x
Zhejiang Starry Pharmaceutical Co.,Ltd. (SHSE:603520)	China	1,388	4.7x	4.3x	24.6x	17.4x
Mean		1,202	6.4x	4.2x	39.1x	11.7x
Median		941	5.4x	3.6x	24.6x	11.7x

Imaging Diagnostics

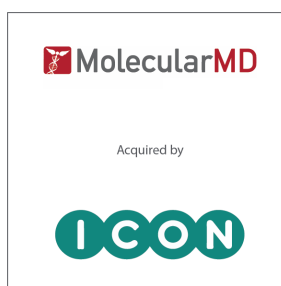
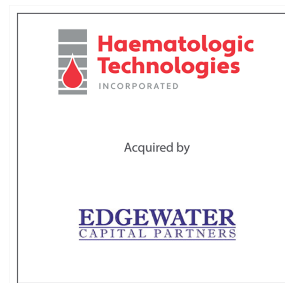
Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
4DMedical Limited	Australia	52	55.2x	23.9x	NM	NM
Detection Technology Oyj	Finland	278	2.7x	2.3x	29.0x	13.6x
iRay Technology Company Limited	China	4,129	19.5x	13.2x	54.6x	30.5x

Kromek Group plc	United Kingdom	59	3.5x	2.5x	NM	NM
Nano-X Imaging Ltd. (NasdaqGM:NNOX)	Israel	288	37.2x	17.5x	NM	NM
Ray Co., Ltd.	Korea (Republic of)	318	3.9x	2.5x	71.1x	10.1x
Rayence Co., Ltd.	Korea (Republic of)	62	0.6x	0.5x	2.6x	2.3x
Siemens Healthineers AG	Germany	74,389	3.2x	3.2x	17.6x	16.0x
SonoScape Medical Corp.	China	2,829	11.2x	11.0x	53.7x	44.2x
Varex Imaging Corporation (NasdaqGS:VREX)	United States	1,087	1.3x	1.2x	8.6x	8.3x
Mean		8,349	13.8x	7.8x	33.9x	17.9x
Median		303	3.7x	2.8x	29.0x	13.6x

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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