

Industry BlueBook

Diagnostics & Tools

January 2023

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

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

EV MULTIPLES

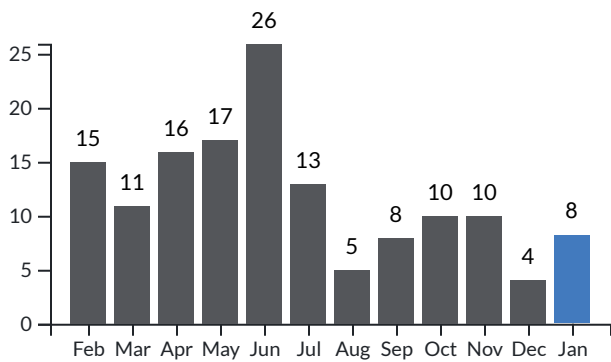
	REVENUE				EBITDA			
	LTM	%Δ	FTM	%Δ	LTM	%Δ	FTM	%Δ
In Vitro Diagnostics	3.7x	4%	3.5x	-2%	15.0x	9%	14.5x	3%
Diagnostic Services	2.6x	9%	2.3x	0%	10.0x	-9%	10.8x	5%
Life Science Tools	5.1x	12%	5.2x	14%	26.2x	-5%	19.8x	-9%
In Vivo Diagnostics	4.3x	1%	3.7x	6%	24.3x	21%	15.7x	24%

M&A DEALS & FINANCINGS

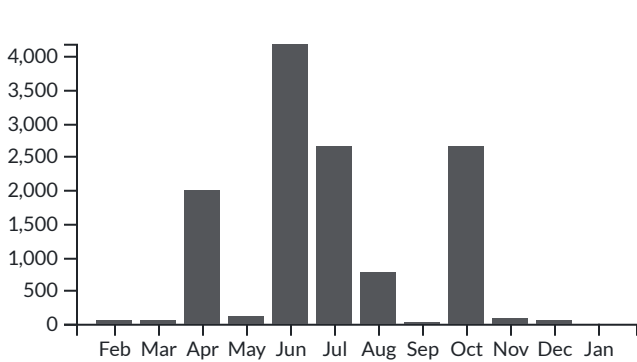
	DEAL COUNT				VOLUME (\$MM)			
	M&A	%Δ	FINANCINGS	%Δ	M&A	%Δ	FINANCINGS	%Δ
In Vitro Diagnostics	1	NM	5	150%	0	NM	9	-25%
Diagnostic Services	0	-100%	3	50%	0	NM	2	-94%
Life Science Tools	5	400%	4	-20%	0	NM	60	84%
In Vivo Diagnostics	2	NM	7	0%	0	NM	58	-48%

- 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

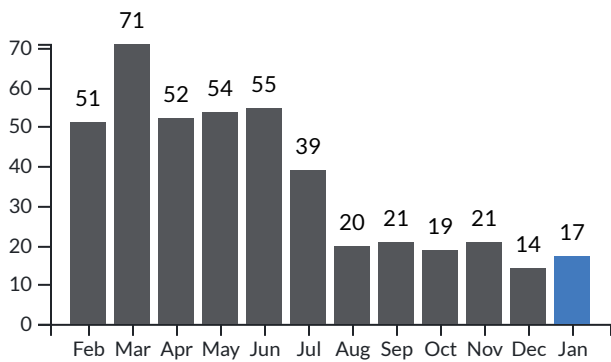
12 Month Deal Count M&A



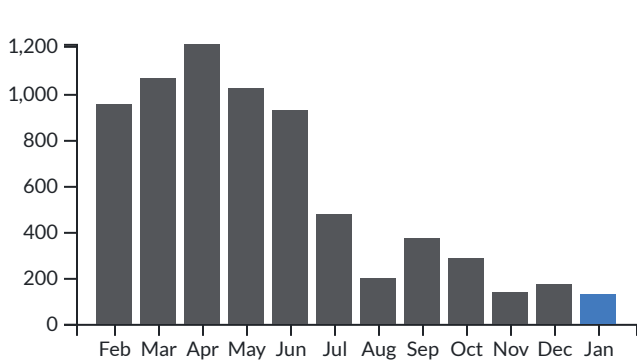
12 Month Volume M&A (\$MM)



12 Month Deal Count Financings

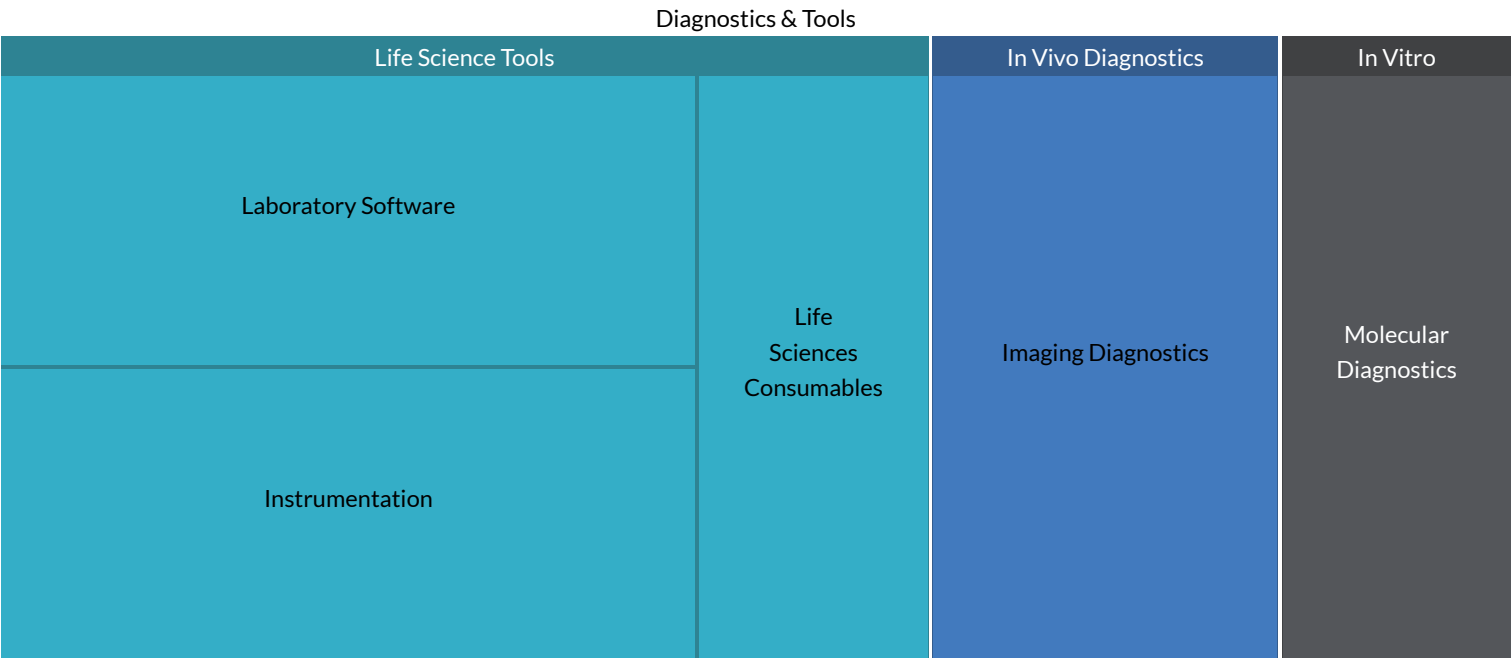


12 Month Volume Financings (\$MM)

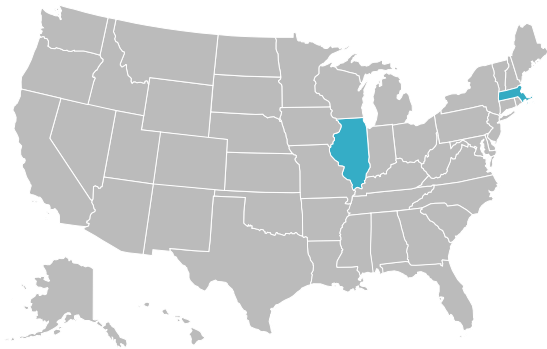


M&A ACTIVITY

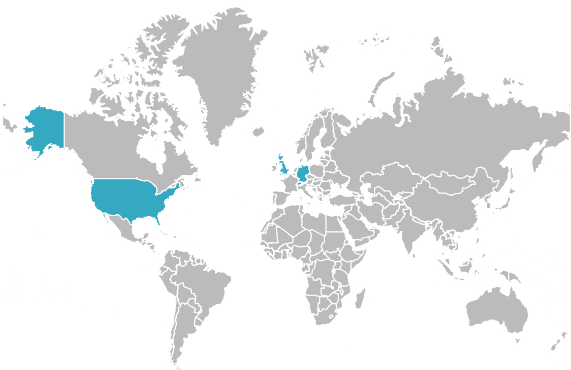
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY



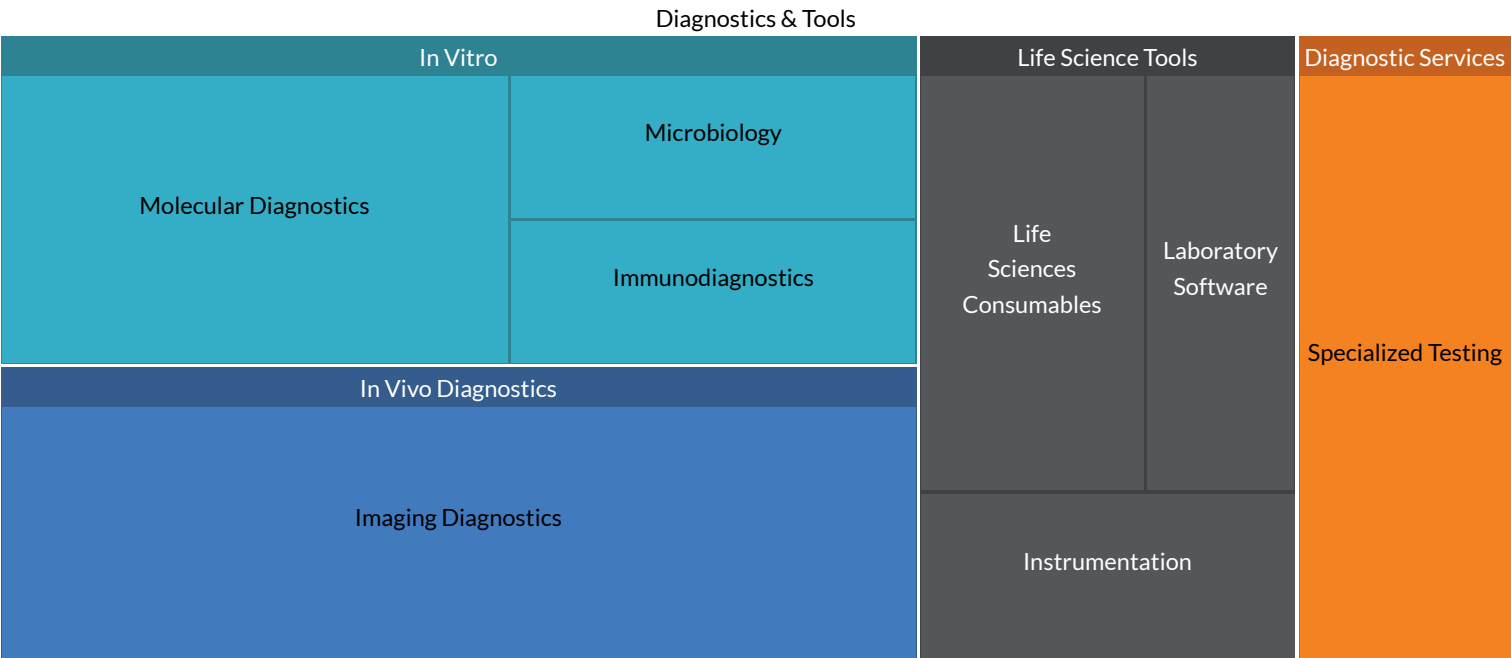
SELECTED TRANSACTIONS						
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
1/19/2023	Life Science Tools	Lab Software	Seven Bridges Genomics Inc.	United States	Summa Equity AB / Velsera	-
1/12/2023	Life Science Tools	Lab Software	PierianDx, Inc.	United States	Summa Equity AB / Velsera	-
1/12/2023	Life Science Tools	Lab Software	UgenTec	United States	Summa Equity AB / Velsera	-

SELECTED TRANSACTIONS

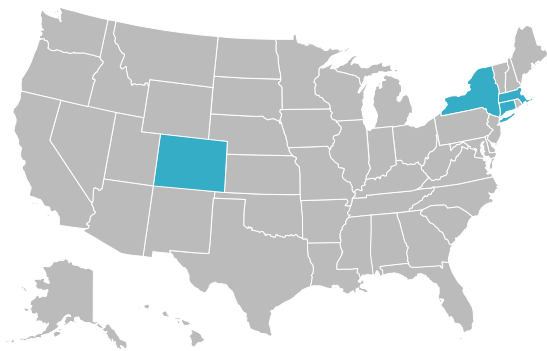
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
1/18/2023	In Vivo Diagnostics	Imaging Diagnostics	Blackford Analysis Ltd	United Kingdom	Bayer Aktiengesellschaft (XTRA:BAYN)	-
1/18/2023	In Vitro	Molecular	4SR Biosciences Inc.	United States	hC Bioscience, Inc.	-
1/5/2023	Life Science Tools In Vivo Diagnostics	Lab Software Instrumentation Imaging Diagnostics	ACQUIFER Imaging GmbH	Germany	Bruker Corporation (NasdaqGS:BRKR)	-
1/4/2023	Life Science Tools	Consumables	Biognosys AG	Switzerland	Bruker Corporation (NasdaqGS:BRKR)	-

FINANCINGS

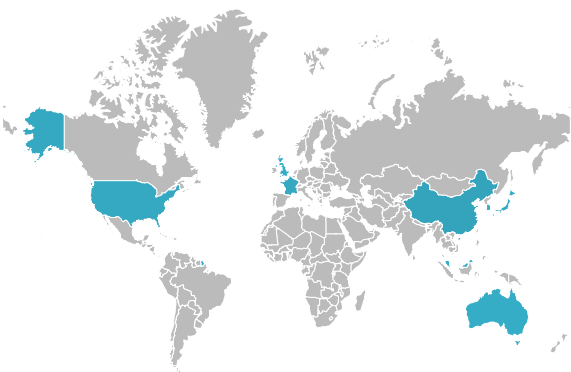
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY



SELECTED TRANSACTIONS						
Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
1/30/2023	Diagnostic Services	Specialized Testing	MEDIZEN HUMANCARE Inc. (XKON:A236340)	Korea (Republic of)	Daesang Well Life Co., Ltd.	1.6
1/30/2023	In Vitro Diagnostic Services	Molecular Specialized Testing	MCBI, Inc.	Japan	Kaga Electronics Co.,Ltd. (TSE:8154)	-
1/30/2023	In Vitro	Molecular	Jiaohong Biotechnology (Shanghai) Co., Ltd.	China	Shanghai Prosperico Ventures Co., Ltd., Furong Capital	3.0

Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
1/22/2023	Life Science Tools	Consumables	Ferronova Pty Ltd	Australia	Uniseed Pty Limited, Artesian Capital Management (Australia) Pty. Ltd., Renew Pharmaceuticals Limited	5.6
1/20/2023	In Vitro	Molecular Immunodiagnos	Huzhou Shenke Biotechnology Co., Ltd.	China	CLSA Capital Partners, CITIC Capital Asset Management Limited, Gold Stone Investment Co., Ltd., Riverhead Capital Investment Management Co., Ltd., CICC Capital Management Co., Ltd.	-
1/19/2023	In Vivo Diagnostics	Imaging Diagnostics	Feitu Medical Imaging	China	Yichun State-owned Capital Investment Operation Group Limited	3.0
1/18/2023	In Vitro	Molecular	Biogenes technologies	Malaysia	Cradle Fund Sdn Bhd, Antler Innovation Pte. Ltd.	5.7
1/18/2023	Life Science Tools	Consumables	MDHC Life Technologies (Kunshan) Co., Ltd.	China	Luxin Venture Capital Group Co., Ltd. (SHSE:600783)	29.7
1/18/2023	In Vivo Diagnostics	Imaging Diagnostics	DeepLook, Inc.	United States	Undisclosed	-
1/17/2023	Life Science Tools	Instrumentation	InDevR, Inc.	United States	bioMérieux S.A. (ENXTPA:BIM), Adjuvant Capital, LP	9.0
1/16/2023	In Vivo Diagnostics	Imaging Diagnostics	Fusot (Shanghai) Medical Technology Co., Ltd	China	Sunland Capital, Richen Investment Management Co., Ltd.	-
1/16/2023	In Vitro In Vivo Diagnostics	Microbiology Imaging Diagnostics	CarbGeM Inc.	Japan	UB Ventures Inc.	-
1/11/2023	In Vivo Diagnostics	Imaging Diagnostics	Intrasense SAS	France	Guerbet SA (ENXTPA:GBT)	9.5
1/11/2023	Diagnostic Services	Specialized Testing	Yourgene Health Plc (AIM:YGEN)	United Kingdom	Intuitive Investments Group Plc (AIM:IIG)	0.2
1/9/2023	In Vivo Diagnostics	Imaging Diagnostics	Qritive Pte. Ltd.	Singapore	Exfinity Venture Partners LLP, MassMutual Ventures LLC, SEEDS Capital Pte. Ltd.	7.5
1/5/2023	In Vivo Diagnostics	Imaging Diagnostics	Substrate HD SAS	France	Gilde Healthcare Partners B.V., LSV Capital Management, LLC, Vensana Capital Management, LLC	37.9
1/5/2023	Life Science Tools	Lab Software	Linus Biotechnology Inc.	United States	Greatpoint Investment Management, LLC, Bow Capital, Divergent Investments	16.0

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	1,595	12.4x	12.2x	56.2x	31.4x
Biocartis Group NV (ENXTBR:BCART)	Belgium	209	3.3x	NM	NM	NM
Genomictree Inc.	Korea (Republic of)	84	3.4x	NM	14.7x	NM
Guangdong HybriBio Biotech Co.,Ltd.	Hong Kong	1,069	1.5x	1.3x	3.1x	NM
Oncimmune Holdings plc	United Kingdom	67	14.0x	NM	NM	NM
Qiagen Genomics, Inc.	Netherlands	11,560	5.2x	5.8x	15.4x	15.8x
Sansure Biotech Inc.	China	1,182	1.5x	NM	3.4x	NM
Seegene, Inc.	Korea (Republic of)	716	0.8x	1.4x	2.1x	4.6x
Tellgen Corporation	China	468	4.4x	3.9x	19.7x	13.3x
Zhejiang Orient Gene Biotech Co., Ltd. (SHSE:688298)	China	819	0.5x	NM	1.2x	NM
Mean		1,777	4.7x	4.9x	14.5x	16.3x
Median		768	3.3x	3.9x	9.0x	14.5x

Microbiology

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Accelerate Diagnostics, Inc.	United States	90	6.9x	5.9x	NM	NM
bioMérieux S.A. (ENXTPA:BIM)	France	12,125	3.2x	3.1x	11.5x	13.1x
Meridian Bioscience, Inc.	United States	1,444	4.3x	5.1x	15.3x	NM
OraSure Technologies, Inc. (NasdaqGS:OSUR)	United States	322	1.0x	1.2x	NM	49.6x
Quidel Corporation (NasdaqGS:QDEL)	United States	8,248	2.7x	2.9x	5.7x	10.5x
Sansure Biotech Inc.	China	1,182	1.5x	NM	3.4x	NM
T2 Biosystems, Inc.	United States	52	2.2x	2.1x	NM	NM
Mean		3,352	3.1x	3.4x	9.0x	24.4x
Median		1,182	2.7x	3.0x	8.6x	13.1x

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	295	4.1x	NM	40.5x	NM
Mean		295	4.1x	NM	40.5x	NM
Median		295	4.1x	NM	40.5x	NM

Hematology & Coagulation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Beijing Succeeder Technology Inc.	China	341	9.6x	NM	24.6x	NM
Quotient Sciences	Switzerland	251	6.7x	NM	NM	NM
Sysmex Corporation (TSE:6869)	Japan	13,411	4.5x	4.0x	18.6x	15.7x
Mean		4,668	6.9x	4.0x	21.6x	15.7x

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	1,739	2.3x	2.3x	10.0x	10.4x
Centro de Imagem Diagnósticos S.A.	Brazil	691	3.2x	NM	34.4x	NM
Integral Diagnostics Limited (ASX:IDX)	Australia	679	2.7x	2.3x	12.8x	10.5x
Medica Group Plc (LSE:MGP)	United Kingdom	249	2.8x	2.7x	13.9x	12.5x
RadNet, Inc. (NasdaqGM:RDNT)	United States	2,696	2.0x	1.9x	9.1x	12.8x
Mean		1,211	2.6x	2.3x	16.0x	11.5x
Median		691	2.7x	2.3x	12.8x	11.5x

Specialized Testing

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Adaptive Biotechnologies Corporation	United States	907	5.4x	NM	NM	NM
BGI Genomics Co., Ltd.	China	2,320	2.6x	NM	13.2x	NM
BioNexus Gene Lab Corporation	Malaysia	172	15.2x	NM	NM	NM
Burning Rock Biotech Limited	China	173	2.2x	1.9x	NM	NM
CareDx, Inc (NasdaqGM:CDNA)	United States	545	1.7x	1.6x	NM	NM
Castle Biosciences, Inc. (NasdaqGM:CSTL)	United States	461	3.7x	2.8x	NM	NM
Exact Sciences	United States	13,786	6.9x	6.3x	NM	NM
Fulgent Genetics, Inc.	United States	147	0.2x	0.6x	0.4x	NM
Genetron Holdings Limited	China	60	0.7x	0.7x	NM	NM
Invitae Corporation	United States	1,739	3.3x	3.4x	NM	NM
MDxHealth SA	Belgium	123	3.7x	2.1x	NM	NM
Myriad Genetics, Inc. (NasdaqGS:MYGN)	United States	1,476	2.2x	2.1x	104.0x	NM
Natera, Inc.	United States	4,576	5.9x	4.9x	NM	NM
NeoGenomics, Inc.	United States	1,669	3.4x	3.2x	NM	NM
Oncimmune Holdings plc	United Kingdom	67	14.0x	NM	NM	NM
Progenity, Inc. (NasdaqGM:PROG)	United States	133	NM	NM	NM	NM
Veracyte, Inc. (NasdaqGM:VCYT)	United States	1,650	5.8x	5.2x	NM	NM
Mean		1,765	4.8x	2.9x	39.2x	NM
Median		545	3.5x	2.5x	13.2x	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	3,492	1.4x	1.3x	10.1x	6.7x
Dr. Lal PathLabs Limited (NSEI:LALPATHLAB)	India	2,105	8.5x	7.7x	35.4x	30.0x
Guangzhou Kingmed Diagnostics Group Co., Ltd.	China	5,532	2.4x	3.1x	9.2x	10.6x
H.U. Group Holdings, Inc.	Japan	1,345	0.6x	0.7x	3.1x	4.0x
Instituto Hermes Pardini S.A.	Brazil	624	1.5x	1.4x	8.1x	6.4x
Integrated Diagnostics Holdings plc	Jersey	352	1.6x	2.7x	4.6x	7.3x

LabCorp	United States	28,300	1.9x	1.9x	8.2x	10.9x
Medicover AB (publ) (OM:MCOV B)	Sweden	3,418	2.2x	1.9x	13.6x	12.5x
Metropolis Healthcare Limited (NSEI:METROPOLIS)	India	864	6.0x	5.6x	24.1x	21.3x
Quest Diagnostics Incorporated	United States	20,964	2.0x	2.3x	7.8x	11.6x
Sonic Healthcare Limited	Australia	12,292	1.9x	2.1x	6.3x	9.5x
Thyrocare Technologies Limited	India	350	5.6x	5.0x	20.1x	18.1x
Mean		6,637	3.0x	3.0x	12.5x	12.4x
Median		2,762	2.0x	2.2x	8.7x	10.8x

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	426	3.6x	16.7x	NM	NM
Schrödinger, Inc. (NasdaqGS:SDGR)	United States	1,345	7.9x	6.5x	NM	NM
Simulations Plus, Inc.	United States	706	13.2x	11.3x	47.6x	35.0x
SyntekaBio, Inc.	Korea (Republic of)	84	NM	NM	NM	NM
Mean		640	8.2x	11.5x	47.6x	35.0x
Median		566	7.9x	11.3x	47.6x	35.0x

Life Sciences Consumables

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Abcam plc	United Kingdom	3,321	7.8x	6.5x	31.4x	19.6x
Abnova (Taiwan) Corporation	Taiwan (Province of China)	66	4.9x	NM	30.1x	NM
Adaptive Biotechnologies Corporation	United States	907	5.4x	NM	NM	NM
Avantor, Inc.	United States	22,010	2.9x	3.0x	13.3x	14.2x
Bio-Techne	United States	12,643	11.3x	10.3x	33.5x	26.5x
Bioneer Corporation	Korea (Republic of)	514	2.8x	2.3x	22.4x	NM
Borosil Limited (BSE:543212)	India	499	4.2x	NM	27.6x	NM
Collectis S.A.	France	118	4.8x	2.4x	NM	NM
Genscript Biotech Corporation	China	6,516	11.1x	9.0x	NM	NM
Guangzhou Jet Bio-Filtration Co., Ltd.	China	508	4.9x	4.6x	18.6x	NM
Guerbet SA (ENXTPA:GBT)	France	525	0.7x	0.6x	6.9x	4.7x
NKMAX CO., Ltd.	Korea (Republic of)	448	47.2x	NM	NM	NM
PanGen Biotech Inc.	Korea (Republic of)	56	10.0x	NM	NM	NM
Porton Pharma Solutions Ltd. (SZSE:300363)	China	3,570	3.8x	3.3x	11.5x	10.7x
Qiagen Genomics, Inc.	Netherlands	11,560	5.2x	5.8x	15.4x	15.8x
Repligen Corporation (NasdaqGS:RGEN)	United States	10,134	12.7x	13.1x	36.2x	44.6x
Twist Bioscience Corporation (NasdaqGS:TWST)	United States	1,215	6.0x	4.6x	NM	NM
Vitrolife AB (publ) (OM:VITR)	Sweden	3,057	11.1x	8.8x	34.1x	26.6x
Viva Biotech Holdings	China	766	2.4x	NM	14.0x	NM
Mean		4,128	8.4x	5.7x	22.7x	20.3x
Median		907	5.2x	4.6x	22.4x	17.7x

Instrumentation

Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
10x Genomics, Inc.	United States	5,004	9.9x	8.5x	NM	NM
AnHui Wanyi Science and Technology Co., Ltd.	China	496	5.1x	NM	84.3x	NM
Berkeley Lights, Inc.	United States	60	0.7x	0.6x	NM	NM
Biotage AB (publ) (OM:BIOT)	Sweden	1,003	6.9x	5.9x	27.1x	21.3x
Bruker Corporation (NasdaqGS:BRKR)	United States	10,848	4.3x	4.2x	19.1x	18.8x
Harvard Bioscience, Inc.	United States	176	1.5x	1.5x	33.8x	12.6x
Illumina, Inc.	United States	35,219	7.5x	7.5x	53.3x	52.5x
Mettler-Toledo International Inc.	United States	36,032	9.2x	9.2x	29.6x	27.2x
NanoString Technologies, Inc.	United States	514	3.8x	3.4x	NM	NM
Pacific Biosciences of California, Inc.	United States	3,010	22.0x	NM	NM	NM
Quanterix Corporation (NasdaqGM:QTRX)	United States	223	2.0x	2.1x	NM	NM
Standard BioTools Inc.	United States	388	3.6x	NM	NM	NM
Waters Corporation	United States	20,706	7.0x	6.9x	20.2x	19.9x
Mean		8,745	6.4x	5.0x	38.2x	25.4x
Median		1,003	5.1x	5.1x	29.6x	20.6x

Lab/Biobank Equipment

Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
BICO Group AB (publ) (OM:BICO)	Sweden	821	3.7x	3.8x	NM	NM
Sartorius Aktiengesellschaft (XTRA:SRT)	Germany	31,013	7.1x	6.5x	21.6x	19.5x
Stratec SE	Germany	1,147	3.9x	3.5x	19.0x	14.7x
Tecan Group Ltd. (SWX:TECN)	Switzerland	5,366	4.6x	4.3x	25.2x	21.0x
Mean		9,587	4.8x	4.5x	22.0x	18.4x
Median		3,257	4.2x	4.0x	21.6x	19.5x

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	56	6.6x	4.2x	NM	NM
Contec Medical Systems Co.,Ltd	China	1,553	16.1x	NM	89.1x	NM
Guangdong Transtek Medical Electronics Co., Ltd	China	239	1.2x	NM	NM	NM
iRhythm Technologies, Inc.	United States	2,886	7.6x	6.2x	NM	NM
TaiDoc Technology Corporation	Taiwan (Province of China)	471	1.5x	2.2x	3.4x	5.5x
Zhejiang Starry Pharmaceutical Co.,Ltd. (SHSE:603520)	China	1,416	4.6x	4.3x	24.5x	17.3x
Mean		1,104	6.3x	4.2x	39.0x	11.4x
Median		944	5.6x	4.2x	24.5x	11.4x

Imaging Diagnostics

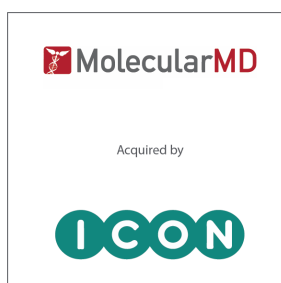
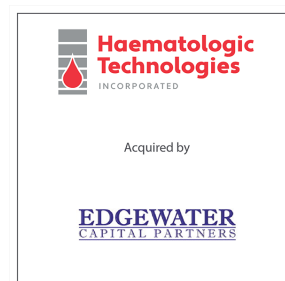
Company Name	Geography	Enterprise Value	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV

		(\$mm)	LTM EV	FTM EV	LTM EV	FTM EV
Siemens Healthineers AG (XTRA:SHL)	Germany	76,205	3.2x	3.2x	16.9x	16.5x
4DMedical Limited	Australia	59	79.0x	17.0x	NM	NM
Detection Technology Oyj	Finland	294	3.0x	2.4x	24.1x	15.7x
iRay Technology Company Limited	China	4,796	22.1x	17.0x	61.7x	39.5x
Kromek Group plc	United Kingdom	68	3.9x	2.8x	NM	NM
Nano-X Imaging Ltd. (NasdaqGM:NNOX)	Israel	394	50.9x	23.9x	NM	NM
Ray Co., Ltd.	Korea (Republic of)	318	3.6x	2.5x	66.6x	10.5x
Rayence Co., Ltd.	Korea (Republic of)	70	0.6x	0.5x	2.7x	2.4x
SonoScape Medical Corp.	China	3,012	11.6x	11.7x	55.7x	47.0x
Varex Imaging Corporation (NasdaqGS:VREX)	United States	1,258	1.5x	1.4x	10.0x	8.3x
Mean		8,647	17.9x	8.2x	34.0x	20.0x
Median		356	3.8x	3.0x	24.1x	15.7x

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.



Contact Us

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