

Industry BlueBook

Diagnostics & Tools

July 2023

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

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

EV MULTIPLES

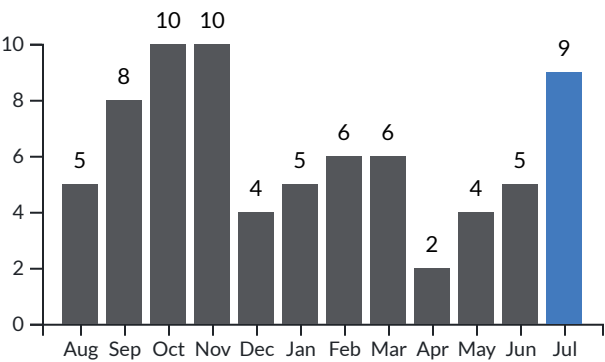
	REVENUE				EBITDA			
	LTM	%Δ	FTM	%Δ	LTM	%Δ	FTM	%Δ
In Vitro Diagnostics	4.3x	19%	3.1x	-1%	18.3x	9%	13.3x	-1%
Diagnostic Services	2.6x	-6%	2.4x	0%	12.4x	-7%	10.9x	-5%
Life Science Tools	5.5x	3%	5.4x	14%	21.9x	-4%	18.7x	-5%
In Vivo Diagnostics	3.6x	-12%	3.5x	-5%	32.5x	9%	16.6x	10%

M&A DEALS & FINANCINGS

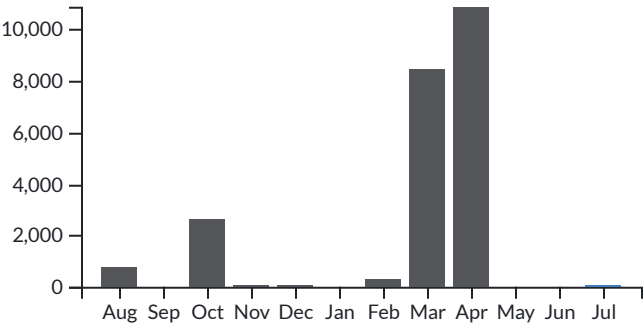
	DEAL COUNT				VOLUME (\$MM)			
	M&A	%Δ	FINANCINGS	%Δ	M&A	%Δ	FINANCINGS	%Δ
In Vitro Diagnostics	3	200%	6	200%	0	NM	59	10,724%
Diagnostic Services	5	67%	3	-40%	87	2,076%	23	14%
Life Science Tools	1	0%	4	-20%	40	NM	10	-87%
In Vivo Diagnostics	0	NM	7	75%	0	NM	38	-10%

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

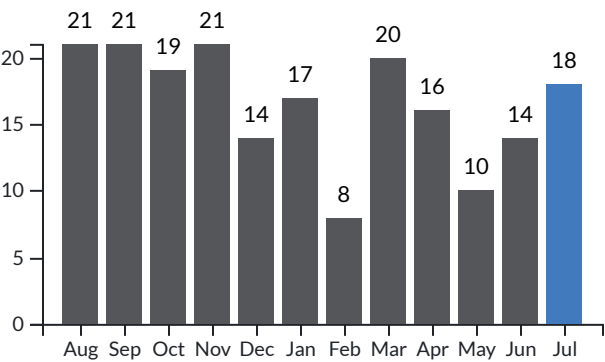
12 Month Deal Count M&A



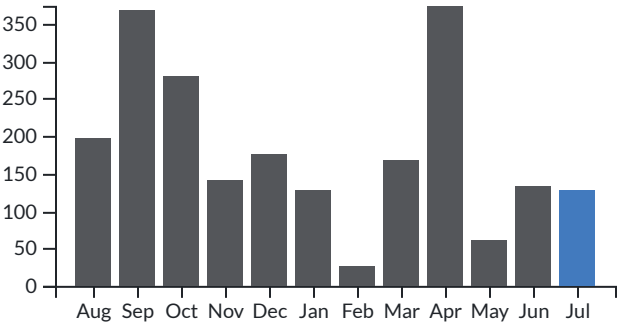
12 Month Volume M&A (\$MM)



12 Month Deal Count Financings

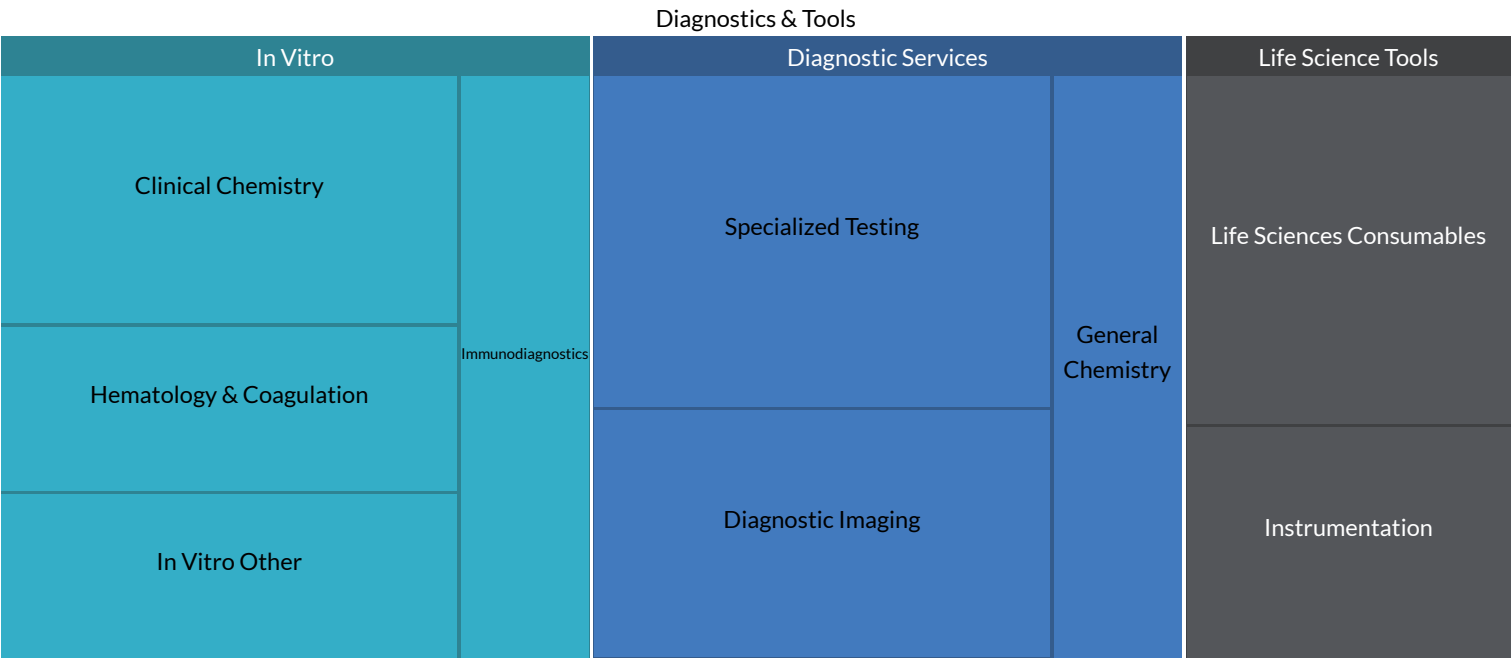


12 Month Volume Financings (\$MM)

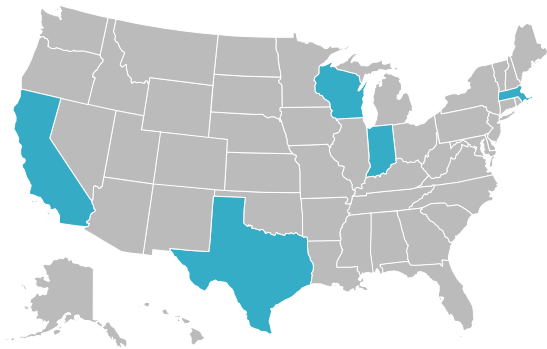


M&A ACTIVITY

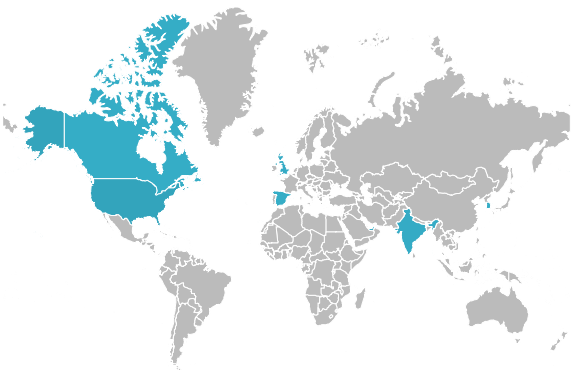
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY

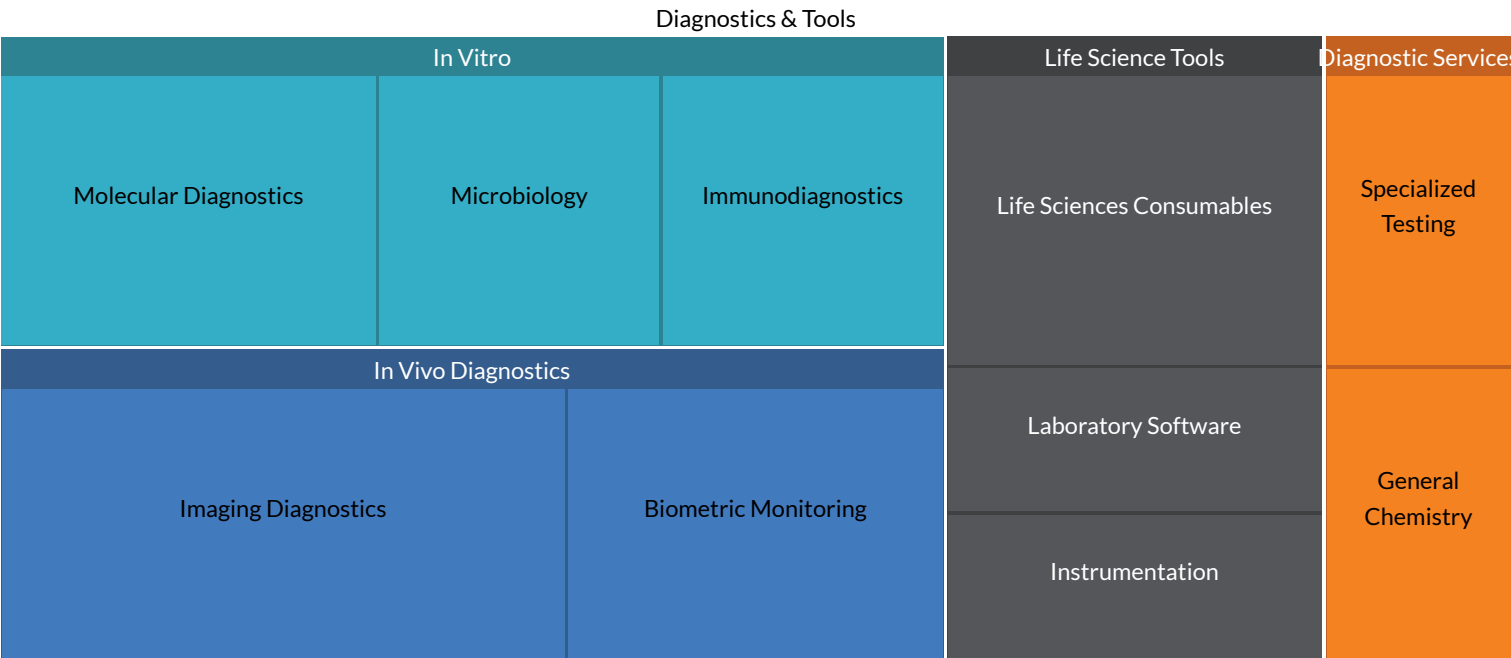


SELECTED TRANSACTIONS						
Announced Date	Segment	Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
7/31/2023	In Vitro	In Vitro Other	PALEX MEDICAL, S.A.	Spain	Apax Partners LLP	-
7/28/2023	Diagnostic Services	Diagnostic Imaging General Chemistry	Indira IVF Hospital Private Limited	India	BPEA EQT	-
7/24/2023	In Vitro	Chemistry	Kova International, Inc.	United States	LGC Limited	-
7/24/2023	Diagnostic Services	Specialized Testing	DE Laboratory LLC	United States	Laboratory Services MSO, LLC	-

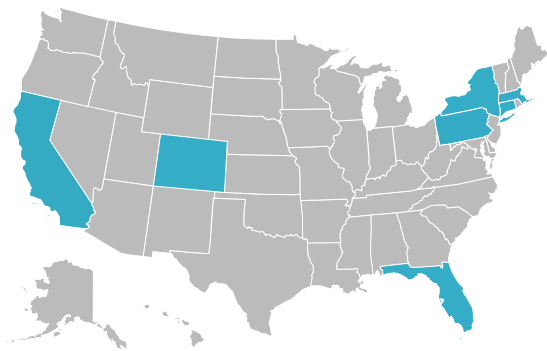
Announced Date Segment		Sub-Segment	Target Company	Geography	Selected Buyers	Size (\$mm)
7/12/2023	In Vitro	Hematology & Coagulation Immunodiagnosics Chemistry	International Point of Care, Inc.	Canada	Fortis Life Sciences LLC	-
7/12/2023	Life Science Tools	Instrumentation	NanoEntek, Inc. (KOSDAQ:A039860)	Korea (Republic of)	A Plus Life Co., Ltd.	40.4
7/10/2023	Diagnostic Services	Specialized Testing	Quantigen, LLC	United States	Versiti, Inc.	-
7/5/2023	Diagnostic Services	Diagnostic Imaging	Malabar Institute of Medical Sciences Ltd.	India	Aster DM Healthcare Limited (NSEI:ASTERDM)	2.9
7/3/2023	Diagnostic Services	Specialized Testing	Yourgene Health Plc (AIM:YGEN)	United Kingdom	Novacyt UK Holdings Limited	43.8

FINANCINGS

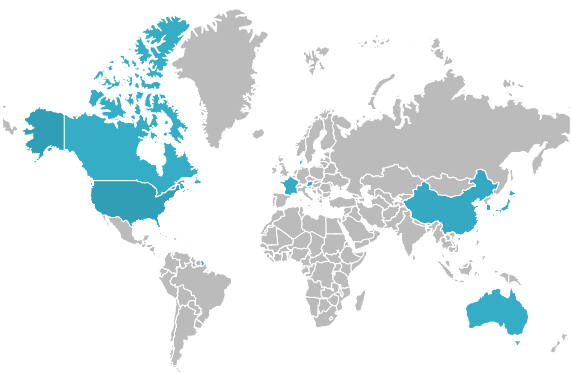
DEALS BY SEGMENT



U.S. DEALS BY STATE



WORLDWIDE DEALS BY COUNTRY



SELECTED TRANSACTIONS						
Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
7/31/2023	Life Science Tools	Consumables	Goryo Chemical, Inc.	Japan	S Ventures Co., Ltd.	-
7/31/2023	Diagnostic Services	General Chemistry	Proteocyte AI	Canada	Undisclosed	0.0
7/31/2023	In Vitro Life Science Tools	Immunodiagnostics Consumables	BioPorto A/S (CPSE:BIOPOR)	Denmark	Undisclosed	0.1
7/28/2023	Life Science Tools	Lab Software	SyntekaBio, Inc.	Korea (Republic of)	Undisclosed	7.8

Closed Date	Segment	Sub-Segment	Target Company	Geography	Selected Investors	Size (\$mm)
7/27/2023	Life Science Tools	Consumables	RealSeq Biosciences, Inc.	United States	Berkeley Angel Network, Chemical Angel Network, MEDA Angels, LLC, Angel Star Ventures Investment LLC, TiE SoCal Angels	1.5
7/25/2023	In Vivo Diagnostics	Imaging Diagnostics	PaceMate, LLC	United States	Lead Edge Capital Management, LLC	-
7/25/2023	In Vitro	Molecular	MiRXES Pte. Ltd.	Singapore	Mitsui & Co., Ltd. (TSE:8031), EDBI Pte Ltd, Agency for Science, Technology and Research, NHH Ventures	50.0
7/21/2023	In Vitro	Microbiology	optoLANE Technologies Inc	Korea (Republic of)	L&S Venture Capital Corp., Solidus Investment Co., Ltd.	6.9
7/19/2023	In Vitro	Immunodiagnosics	Guangdong Seinda Biomedical Corporation	China	Guangzhou Guoju Venture Capital Co., Ltd.	-
7/19/2023	In Vivo Diagnostics	Imaging Diagnostics	Tianjin Hengyu Medical Technology Co., Ltd.	China	Beijing Jinhuitong Investment Fund Management Co., Ltd.	13.8
7/14/2023	In Vitro	Molecular	ImCare Biotech, Inc.	United States	Undisclosed	0.2
7/13/2023	Diagnostic Services	Specialized Testing	GenEplanet d.o.o	Slovenia	Kolektor Group d.o.o., FMR d.o.o., BlackPeak Capital, Impact Ventures Gmbh, Darwin AG (MUN:7V0)	22.4
7/11/2023	In Vivo Diagnostics	Imaging Diagnostics	Sonio SAS	France	Bpifrance Investissement SAS, Elaia Partners, OneRagtime SAS, European Innovation Council (EIC) Fund, Cross-Border Impact Ventures	14.3
7/11/2023	In Vivo Diagnostics	Imaging Diagnostics	piur imaging GmbH	Austria	aescuvest GmbH, Ascend Capital Partners, Investment Arm	5.4
7/5/2023	In Vitro Diagnostic Services	Microbiology	T2 Biosystems, Inc. (NasdaqCM:TTOO)	United States	CR Group L.P.	0.1
7/5/2023	In Vivo Diagnostics	Biometric Monitoring	Grace imaging Inc.	Japan	Mitsubishi UFJ Capital Co., Ltd., SBI Investment Co., Ltd., QB Capital, LLC, Keio Innovation Initiative Inc., D3 LLC.	3.5
7/5/2023	In Vivo Diagnostics	Biometric Monitoring	EyeGuide, Inc.	United States	Undisclosed	0.1
7/4/2023	In Vivo Diagnostics	Biometric Monitoring	Kali Healthcare Pty Ltd	Australia	University of Melbourne, University of Melbourne	1.0

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	1,237	9.7x	7.5x	41.0x	26.5x
Biocartis Group NV	Belgium	141	2.2x	2.2x	NM	NM
Dx & Vx Co., Ltd.	Korea (Republic of)	173	6.2x	NM	NM	NM
Genomictree Inc.	Korea (Republic of)	212	46.6x	NM	NM	NM
Guangdong HybriBio Biotech Co.,Ltd.	Hong Kong	809	1.3x	NM	2.9x	NM
Qiagen N.V.	Netherlands	11,305	5.7x	5.4x	19.9x	15.5x
Sansure Biotech Inc.	China	702	1.0x	NM	3.3x	NM
Seegene, Inc.	Korea (Republic of)	531	1.4x	1.8x	19.3x	8.3x
Tellgen Corporation	China	390	4.0x	3.1x	17.7x	10.1x
Zhejiang Orient Gene Biotech Co., Ltd. (SHSE:688298)	China	228	0.4x	NM	NM	NM
Mean		1,573	7.8x	4.0x	17.3x	15.1x
Median		461	3.1x	3.1x	18.5x	12.8x

Microbiology

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Accelerate Diagnostics, Inc. (NasdaqCM:AXDX)	United States	143	11.3x	8.6x	NM	NM
bioMérieux S.A.	France	12,669	3.2x	3.1x	13.6x	13.3x
OraSure Technologies, Inc. (NasdaqGS:OSUR)	United States	246	0.5x	1.2x	4.5x	NM
QuidelOrtho Corporation	United States	8,200	2.6x	2.8x	8.9x	9.9x
Sansure Biotech Inc.	China	702	1.0x	NM	3.3x	NM
T2 Biosystems, Inc. (NasdaqCM:TTOO)	United States	92	5.4x	7.9x	NM	NM
Mean		3,675	4.0x	4.7x	7.6x	11.6x
Median		474	2.9x	3.1x	6.7x	11.6x

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	306	4.6x	NM	57.6x	NM
Mean		306	4.6x	NM	57.6x	NM
Median		306	4.6x	NM	57.6x	NM

Hematology & Coagulation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Beijing Succeder Technology Inc.	China	349	10.1x	NM	25.6x	NM
Sysmex Corporation	Japan	13,842	4.8x	4.3x	18.9x	16.7x
Mean		7,096	7.5x	4.3x	22.2x	16.7x
Median		7,096	7.5x	4.3x	22.2x	16.7x

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	1,639	2.2x	2.1x	8.3x	10.2x
Centro de Imagem Diagnósticos S.A.	Brazil	850	3.7x	NM	45.4x	NM
Integral Diagnostics Limited (ASX:IDX)	Australia	696	2.6x	2.3x	13.7x	10.9x
RadNet, Inc. (NasdaqGM:RDNT)	United States	3,843	2.6x	2.4x	12.4x	17.0x
Mean		1,757	2.8x	2.2x	20.0x	12.7x
Median		1,245	2.6x	2.3x	13.1x	10.9x
Specialized Testing						
Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Adaptive Biotechnologies Corporation	United States	1,010	5.5x	4.6x	NM	NM
BGI Genomics Co., Ltd.	China	2,607	2.8x	NM	20.2x	NM
Biora Therapeutics, Inc. (NasdaqGM:BIOR)	United States	152	NM	NM	NM	NM
Burning Rock Biotech Limited	China	75	0.9x	0.8x	NM	NM
CareDx, Inc (NasdaqGM:CDNA)	United States	339	1.1x	1.4x	NM	NM
Castle Biosciences, Inc. (NasdaqGM:CSTL)	United States	231	1.5x	1.3x	NM	NM
DermTech, Inc.	United States	52	3.6x	3.0x	NM	NM
Dx & Vx Co., Ltd.	Korea (Republic of)	173	6.2x	NM	NM	NM
Exact Sciences Corporation	United States	19,480	8.9x	7.9x	NM	NM
Fulgent Genetics, Inc. (NasdaqGM:FLGT)	United States	325	0.9x	1.2x	47.1x	NM
Genetron Holdings Limited	China	59	0.6x	NM	NM	NM
Guardant Health, Inc.	United States	5,000	10.4x	8.9x	NM	NM
Invitae Corporation	United States	1,611	3.2x	3.2x	NM	NM
MDxHealth SA	Belgium	91	2.0x	1.3x	NM	NM
Myriad Genetics, Inc. (NasdaqGS:MYGN)	United States	1,875	2.7x	2.5x	NM	NM
Natera, Inc.	United States	4,802	5.5x	4.5x	NM	NM
NeoGenomics, Inc.	United States	2,403	4.5x	4.2x	NM	NM
Sema4 Holdings Corp.	United States	63	0.3x	0.3x	NM	NM
Veracyte, Inc.	United States	1,824	5.9x	5.3x	NM	NM
Mean		2,220	3.7x	3.4x	33.6x	NM
Median		339	3.0x	3.0x	33.6x	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	4,818	1.7x	1.5x	11.6x	8.2x
Dr. Lal PathLabs Limited (NSEI:LALPATHLAB)	India	2,300	9.2x	8.1x	35.0x	31.3x
Guangzhou Kingmed Diagnostics Group Co., Ltd.	China	4,409	2.4x	3.1x	11.0x	15.6x
H.U. Group Holdings, Inc.	Japan	1,356	0.7x	0.8x	4.7x	5.7x
Integrated Diagnostics Holdings plc	Jersey	358	3.3x	2.8x	12.3x	8.7x
Laboratory Corporation of America Holdings	United States	23,275	1.6x	1.9x	9.3x	10.8x
Medicover AB (publ) (OM:MCOV B)	Sweden	3,365	1.9x	1.7x	13.8x	11.0x

Metropolis Healthcare Limited (NSEI:METROPOLIS)	India	875	6.3x	5.8x	25.3x	22.9x
Quest Diagnostics Incorporated	United States	20,123	2.1x	2.2x	9.5x	11.0x
Sonic Healthcare Limited	Australia	12,815	2.2x	2.3x	8.8x	10.4x
Thyrocare Technologies Limited	India	368	5.8x	4.9x	25.1x	20.2x
Mean		6,733	3.4x	3.2x	15.1x	14.2x
Median		3,365	2.2x	2.3x	11.6x	11.0x

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	273	11.7x	33.5x	NM	NM
Schrödinger, Inc.	United States	3,330	16.9x	13.9x	NM	NM
Simulations Plus, Inc. (NasdaqGS:SLP)	United States	871	15.6x	12.9x	69.9x	36.0x
SyntekaBio, Inc.	Korea (Republic of)	134	NM	NM	NM	NM
Mean		1,152	14.8x	20.1x	69.9x	36.0x
Median		572	15.6x	13.9x	69.9x	36.0x

Life Sciences Consumables

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Abcam plc	United Kingdom	5,541	12.7x	10.1x	47.1x	27.4x
Abnova (Taiwan) Corporation	Taiwan (Province of China)	53	4.1x	NM	18.2x	NM
Adaptive Biotechnologies Corporation	United States	1,010	5.5x	4.6x	NM	NM
Avantor, Inc.	United States	19,523	2.7x	2.8x	13.4x	14.4x
Bio-Techne Corporation	United States	13,447	12.0x	10.8x	37.0x	27.3x
Bioneer Corporation	Korea (Republic of)	906	5.4x	NM	NM	NM
Borosil Limited (BSE:543212)	India	642	5.1x	NM	41.3x	NM
Cellectis S.A.	France	116	4.5x	4.8x	NM	NM
Genscript Biotech Corporation	China	4,966	7.9x	5.8x	NM	NM
Guangzhou Jet Bio-Filtration Co., Ltd.	China	315	4.6x	4.1x	26.1x	24.5x
Guerbet SA (ENXTPA:GBT)	France	595	0.7x	0.7x	5.4x	5.5x
NKMAX CO., Ltd.	Korea (Republic of)	462	55.0x	NM	NM	NM
Porton Pharma Solutions Ltd.	China	2,144	2.2x	4.1x	6.5x	10.9x
Qiagen N.V.	Netherlands	11,305	5.7x	5.4x	19.9x	15.5x
Repligen Corporation (NasdaqGS:RGEN)	United States	9,355	12.0x	12.6x	36.0x	49.5x
Twist Bioscience Corporation	United States	1,095	4.8x	4.2x	NM	NM
Vitrolife AB (publ)	Sweden	2,168	6.7x	6.0x	21.2x	17.4x
Viva Biotech Holdings	China	732	2.1x	2.0x	11.2x	10.7x
Mean		4,132	8.5x	5.6x	23.6x	20.3x
Median		1,053	5.3x	4.7x	20.6x	16.4x

Instrumentation

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
10x Genomics, Inc.	United States	7,002	13.1x	11.2x	NM	NM

AnHui Wanyi Science and Technology Co., Ltd.	China	356	3.7x	2.5x	NM	16.8x
Biotage AB (publ) (OM:BIOT)	Sweden	982	6.6x	5.4x	29.3x	22.1x
Bruker Corporation	United States	10,741	4.1x	3.7x	17.9x	17.3x
Harvard Bioscience, Inc.	United States	244	2.1x	2.0x	31.8x	12.2x
Illumina, Inc.	United States	31,914	7.2x	6.2x	66.0x	52.4x
Mettler-Toledo International Inc. (NYSE:MTD)	United States	29,564	7.5x	7.5x	22.7x	22.5x
NanoString Technologies, Inc.	United States	320	2.4x	1.7x	NM	NM
Pacific Biosciences of California, Inc.	United States	3,373	25.2x	17.5x	NM	NM
PhenomeX Inc. (NasdaqGS:CELL)	United States	102	1.3x	1.2x	NM	NM
Quanterix Corporation (NasdaqGM:QTRX)	United States	644	6.2x	5.9x	NM	NM
Standard BioTools Inc.	United States	451	4.7x	NM	NM	NM
Waters Corporation	United States	17,392	5.9x	5.4x	17.1x	15.5x
Mean		7,930	6.9x	5.8x	30.8x	22.7x
Median		982	5.9x	5.4x	26.0x	17.3x
Lab/Biobank Equipment						
Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
BICO Group AB (publ)	Sweden	376	1.6x	1.6x	NM	24.4x
Sartorius Aktiengesellschaft	Germany	29,016	6.8x	6.8x	22.0x	21.9x
Stratec SE	Germany	748	2.6x	2.4x	15.0x	12.2x
Tecan Group Ltd. (SWX:TECN)	Switzerland	5,119	3.9x	3.8x	21.9x	20.0x
Mean		8,815	3.7x	3.6x	19.6x	19.6x
Median		2,934	3.2x	3.1x	21.9x	20.9x

IN VIVO DIAGNOSTICS

Biometric Monitoring

Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
Contec Medical Systems Co.,Ltd	China	1,338	10.7x	NM	41.1x	NM
Guangdong Transtek Medical Electronics Co., Ltd	China	232	1.7x	NM	NM	NM
iRhythm Technologies, Inc.	United States	3,156	7.3x	6.3x	NM	NM
TaiDoc Technology Corporation	Taiwan (Province of China)	420	1.4x	2.8x	3.2x	9.3x
Zhejiang Starry Pharmaceutical Co.,Ltd.	China	1,101	3.6x	3.2x	32.9x	14.4x
Mean		1,249	4.9x	4.1x	25.8x	11.8x
Median		1,101	3.6x	3.2x	32.9x	11.8x

Imaging Diagnostics

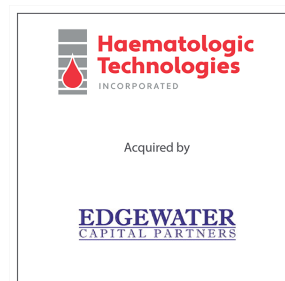
Company Name	Geography	Enterprise Value (\$mm)	xRevenue		xEBITDA	
			LTM EV	FTM EV	LTM EV	FTM EV
4DMedical Limited	Australia	133	NM	20.3x	NM	NM
Detection Technology Oyj	Finland	208	1.9x	1.6x	22.5x	10.7x
iRay Technology Company Limited	China	3,370	14.5x	10.9x	41.1x	25.7x
Kromek Group plc	United Kingdom	67	3.0x	2.5x	NM	57.4x
Nano-X Imaging Ltd. (NasdaqGM:NNOX)	Israel	624	67.8x	33.7x	NM	NM
Perimeter Medical Imaging AI, Inc.	Canada	62	NM	62.5x	NM	NM

Ray Co., Ltd.	Korea (Republic of)	510	5.0x	3.5x	32.5x	18.3x
Siemens Healthineers AG	Germany	81,658	3.4x	3.3x	21.9x	16.6x
SonoScape Medical Corp.	China	2,531	9.7x	7.4x	40.1x	26.5x
Varex Imaging Corporation (NasdaqGS:VREX)	United States	1,314	1.5x	1.4x	11.7x	9.2x
Mean		9,048	13.3x	14.7x	28.3x	23.5x
Median		567	4.2x	5.5x	27.5x	18.3x

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

Jeff Ellis, CFA
Head of Diagnostics & Tools
813-774-4753
jeff.ellis@crosstreecapital.com
www.crosstreecapital.com

Location

Tampa (Headquarters)
5411 Skycenter Dr. Suite 625
Tampa, FL
33607

CROSSTREE