

Company Report – AnPac Bio-Medical Science

June 4, 2020
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Company Note

AnPac Bio-Medical Science Co. Ltd. Sponsored ADR
Class A (ANPC-US)
Biotechnology

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Research Action:

Reiterate rating

Rating: Buy

Prior Rating: Buy

Price 06/03/2020: \$7.60

52 Week High / \$12.18

Low: \$5.22

Key Data: (TTM as of Dec-19)

Excess Cash per Share:

Annual Dividend: \$0.00

Dividend Yield: 0.00%

Ave. Volume (90 Day): 2,372

Shares Outstanding: 11.2M

Float: 20.54%

Insider Ownership: 59.45%

Institution Ownership: 0.01%

Beta: 0.61

Sales TTM: 1.56M

Revenue Growth TTM: 5.80%

Gross Margin TTM: 44.24%

Market Cap: 85.13M

Enterprise Value: 90.11M

Price/Sales: 43.61

Enterprise Value/Sales: 57.86

Investment Thesis

- We reiterate our Buy rating on ANPC, as we see great opportunity for AnPac in Chinese annual physical market and cancer screening market.
- The solid increase for the number of commercial CDA-based tests and the significant cancer risk assessment database will pave the way for AnPac's long-term growth.
- The Extensive Patent Portfolio is still the competitive advantage for AnPac.
- AnPac will target China Annual Physical market to expand business line.
- AnPac has applied for an NMPA Class III medical device registration certificate to further penetrate the cancer screening market.
- We see the strong business recovery trends in China and expect AnPac's CDA business growth will be back on track with higher sales volume and improving average retail pricing in 2H2020.

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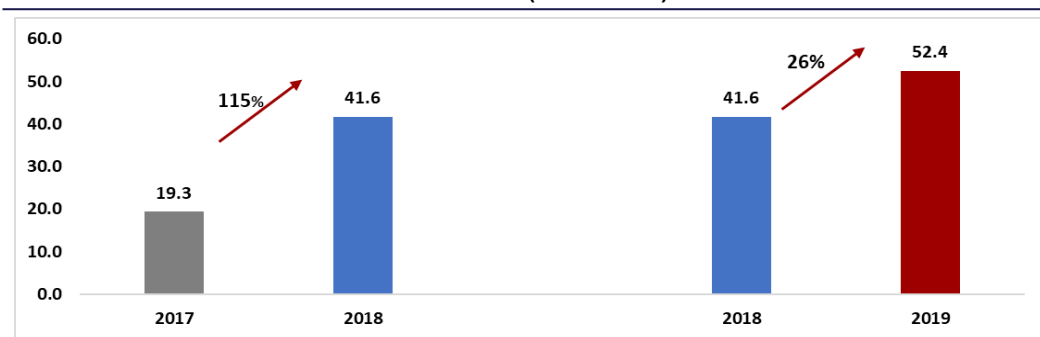
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The solid increase for the number of commercial CDA-based tests and the significant cancer risk assessment database will pave the way for AnPac's long-term growth.

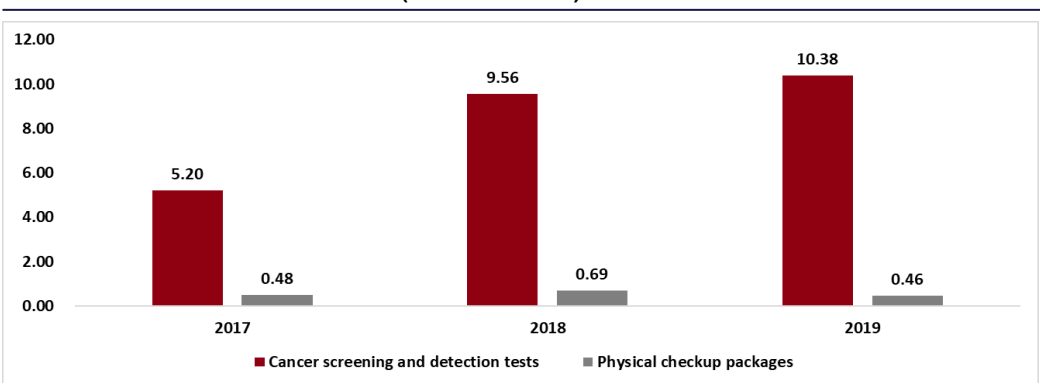
Anpac delivered solid commercial test growth in China. The number of AnPac's commercial CDA-based tests reached a record high of 52,428 in 2019, an increase of 26% from 41,607 in 2018. Revenue from sales of cancer screening and detection tests was RMB10.4 million and contributed 95.7% of total revenue in 2019, an increase of 8.6% Y/Y from RMB 9.6 million in 2018. AnPac also completed 6,121 CDA-based tests research studies with hospitals and medical institutions, an increase of 25.6% over the last year. With several years of operations, AnPac collected a lot of valuable test data from the commercialized cases and research study cases in China, which will pave the way for AnPac's long-term growth.

Exhibit 1: AnPac Number of Commercial CDA Test (in thousand)



Source: Company Data, Tiger Asia Intelligence

Exhibit 2: AnPac Revenue Breakdown (in RMB millions)



Source: Company Data, Tiger Asia Intelligence

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The Extensive Patent Portfolio is still the competitive advantage for AnPac.

AnPac is the first commercialized biotechnology company worldwide focusing on the detection and measurement of cancers' biophysical properties. As of December 2019, AnPac had filed 210 patent applications globally. 121 patents had been granted, including 16 in US, and 55 patents in greater China. AnPac also has 89 patent applications, pending in China, US and nearly 20 other countries and regions. AnPac is capable of developing the patented CDA technology entirely in-house. In May 26, 2019, AnPac announced that another new US patent titled "Apparatus for Improved Disease Detection" was granted to the company by the US, which is the second AnPac Bio patent granted this month, and the third in 2020.

AnPac will target China Annual Physical market to expand business line.

Compared with US Annual Physical Market, the market in China is in its very early stages. AnPac will target this market to expand its business line, growing along with the China Annual Physical Market. In 2018, the total number of annual physicals in China was 449 million, or 31.2% of the total population, far lower than 77% in the US. For people in China, as the living conditions improved, people will focus more on their health. In 2019, AnPac's revenue from sales of physical checkup packages was RMB 464 thousand and contributed 4.3% of total revenue, a decrease of 33.0% Y/Y from RMB 693 thousand in 2018, primarily due to the customer acquisition strategy where AnPac substantially increased the volume of physical checkup packages that sold to agent with significant lower price. We believe that selling of annual physical checkup packages can expand AnPac's customer base for commercial CDA-based tests. Management team will devote more resources to selling physical checkup packages in second half of 2020, which could be a significant growth driver for AnPac.

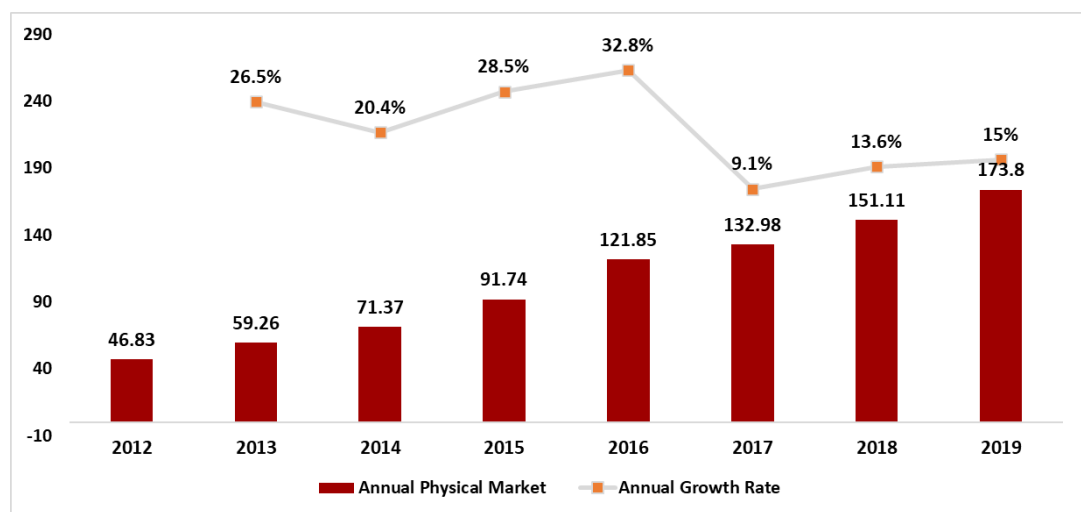
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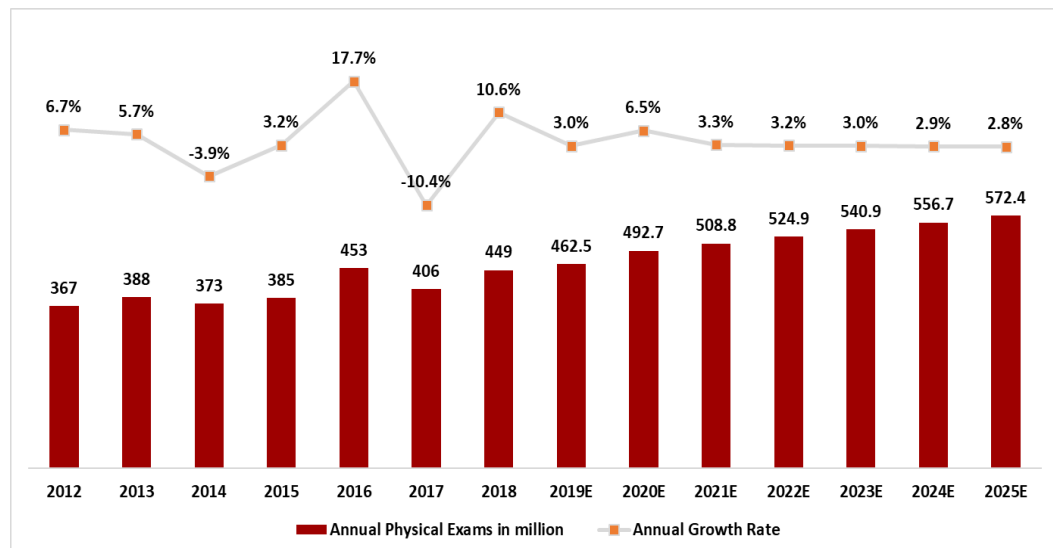
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Exhibit 3: Annual Physicals Market Size in China (in RMB Billion)



Source: iiMedia, Tiger Asia Intelligence

Exhibit 4: Number of Annual Physicals in China (in million)



Source: National Bureau of Statistics of China, Tiger Asia Intelligence

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AnPac has applied for an NMPA Class III medical device registration certificate to further penetrate the cancer screening market.

Currently, AnPac's customer base is primarily corporations and life insurance companies, as well as sales agents like health management companies and medical device dealers, because AnPac currently can only conduct the cancer screening and detection tests in its own certified laboratories. However, China's largest market for cancer screening and detections tests is the hospital market. In December 2018, AnPac had applied for an NMPA Class III medical device registration certificate. After getting the certificate and the updated medical device manufacture license, AnPac will be permitted to conduct commercial tests in Chinese hospital laboratories or sell the devices to the hospitals. We believe that after AnPac receives the NMPA Class III medical device registration certificate, we will see a significant revenue growth for AnPac.

We see the strong business recovery trends in China and expect AnPac's CDA business growth will be back on track with higher sales volume and improving average retail pricing in 2H2020.

Currently, AnPac derives all revenues from China and has a laboratory in US. The outbreak of COVID-19 has caused wide-ranging business disruptions and traffic restrictions in China and US. AnPac's operations also have been adversely impacted by the disruptions. AnPac's blood sampling points in China have been closed since the Chinese New Year, following the strict measures by Chinese government to contain the spread of COVID-19. The closings have caused delays and cancellations of some of the orders for their CDA test. Even though AnPac's revenue in the first half of 2020 has been affected by COVID-19, caused by the closing of AnPac's blood sampling points to follow Chinese government rule, we have seen strong business recovery trend in May and Jun. We believe AnPac's business growth will be on track in 2H2020.

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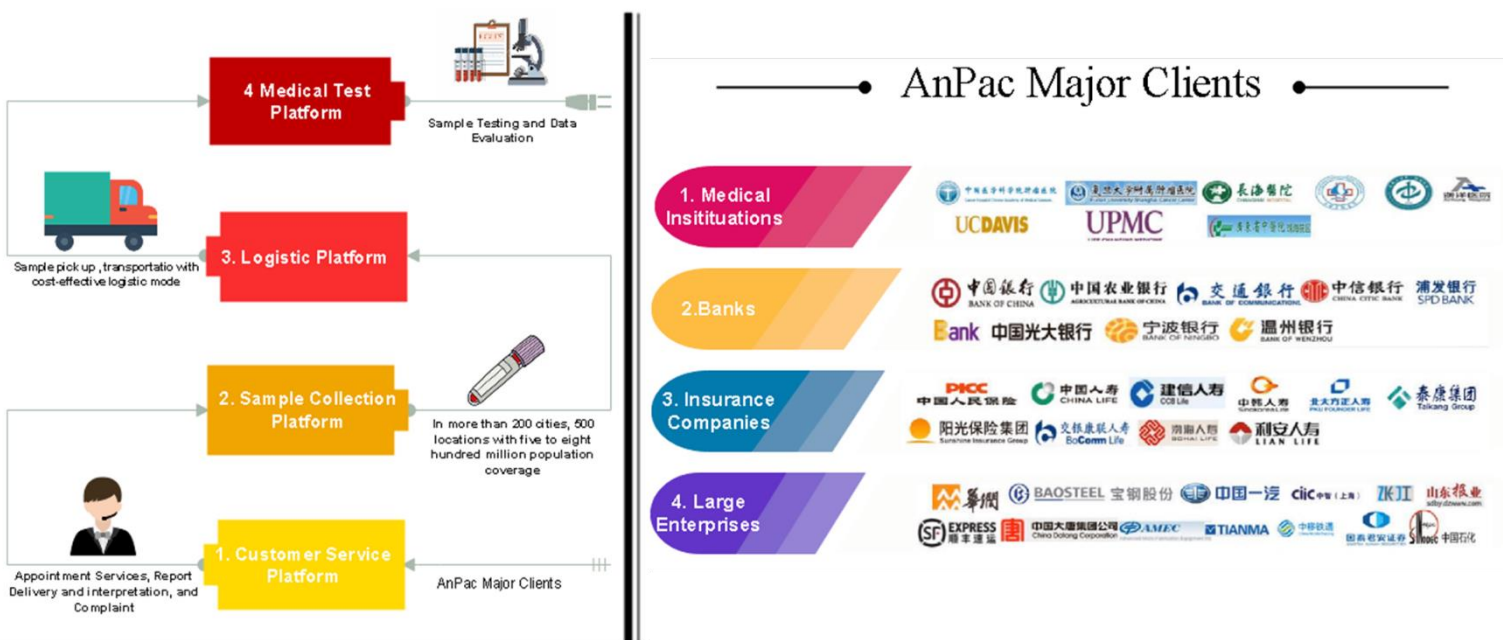
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Company Overview

Founded in 2010, AnPac is a biotechnology company focusing on early stage cancer screening and detection. The company markets and sells a multi-cancer screening and detection test that uses its innovative patented cancer differentiation analysis, or CDA, technology and its proprietary cancer-detection device, or CDA device. AnPac's CDA technology focuses on biophysical properties in human blood, and the CDA test can detect and assess an individual's overall cancer risk with high accuracy, including early-stage cancer. As of September 30, 2019, AnPac's CDA technology has been shown in numerous retrospective validation studies to be able to detect the risk of 26 cancer types with high sensitivity and specificity rates. AnPac has established a test database, consisting of over 140,000 blood samples of various age, sex and disease groups. According to Frost&Sullivan, AnPac ranked first in China and second worldwide among companies offering next-generation early cancer screening and detection technologies in terms of the number of clinical samples for cancer screening and detection as of June 30, 2019.

Exhibit 5: AnPac Business Model



Source: Company Data, Tiger Asia Intelligence

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CDA Technology

Mechanism: CDA technology is a liquid-based cancer risk screening technology. Unlike most other liquid-based cancer screening and detection technologies, AnPac's CDA technology focuses on biophysical properties rather than conventional biochemical or genomic properties. Certain biophysical properties could be important non-genetic aspects of regulating the balance between normal cell growth and carcinogenesis. Biophysical properties increase or decrease progressively in a statistically significant way from a healthy state to non-cancerous disease, pre-cancer disease, early-and late-stage cancer states.

CDA Testing Process: Based on the CDA technology, AnPac uses the test data collected by its proprietary CDA device to determine the PTF value, CTF value and overall CDA value of a blood sample. The PTF value refers to the measured level of protein cancer-related factors in the blood. The CTF value refers to the measured level of cellular cancer-related factors in the blood. The overall CDA value is the principal analysis parameter to assess an individual's overall cancer risk.

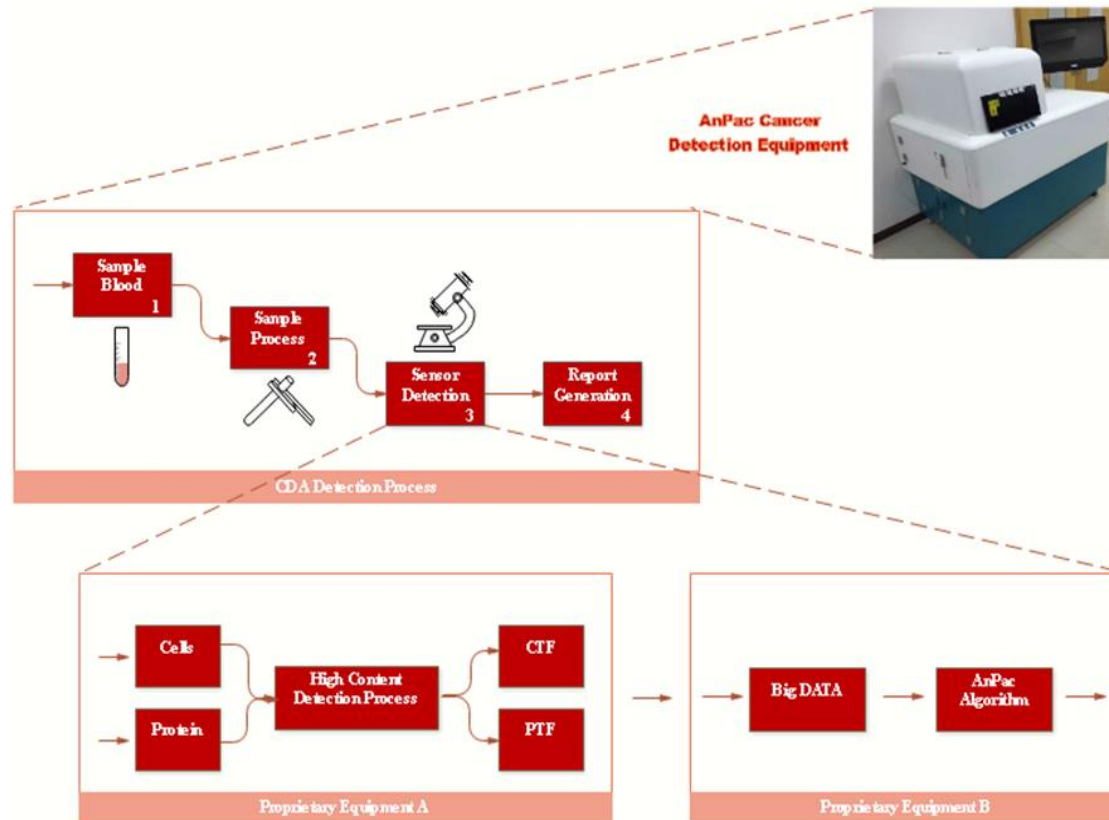
Proprietary Database: Since 2015, AnPac has tested more than 140,000 blood samples collected from various age, sex and disease groups, including approximately 100,000 samples from commercial CDA-based tests and approximately 40,000 samples from its own research studies. Based on approximately 35,000 clinical samples, AnPac ranked first in China and second worldwide among companies offering next-generation early cancer screening and detection technologies in terms of the number of clinical samples.

Expansive Patent Portfolio: AnPac is the first commercialized biotechnology company worldwide focusing on the detection and measurement of cancers' biophysical properties. As of December 2019, AnPac had filed 210 patent applications globally. 121 patents had been granted, including 16 in US, and 55 patents in greater China. AnPac is capable of developing the patented CDA technology entirely in-house.

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Exhibit 6: AnPac CDA Detection Process



Source: Company Data, Tiger Asia Intelligence

Exhibit 7: AnPac Testing Report Result

Items	Result	Indication	Reference	Reference organ
Protein Level Cancer Risk Factor (PTF)	24.7		0~35.0	Overall Protein Level Analysis
Cellular Level Cancer Risk Factor (CTF)	98.2		0~120.0	Overall Cellular Level Analysis
Integrated Cancer Risk Indicator (CDA)	40.1		0~50.0	Integrated Analysis of Overall Cancer Risk
CDA1	23.4		0~50.0	Liver
CDA2	21.0		0~50.0	Liver, lung, gastric/stomach, colorectal, pancreas
CDA5	31.2		0~50.0	Pancreas, gastric/stomach
CDA6	27.3		0~50.0	Prostate
CDA7	32.5		0~50.0	Lung
CDA8	26.3		0~50.0	Lung

Source: Company Data, Tiger Asia Intelligence

Multi-Cancer Screening Report:

Low Risk: Over 42 CDA Values

Medium Risk: 42 – 50 CDA Values

High Risk: Over 50 CDA Values

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Summary

We reiterate our Buy rating on ANPC, as we see great opportunity for AnPac in Chinese annual physical market and cancer screening market. The solid increase in the number of commercial CDA-based tests and the significant cancer risk assessment database will pave the way for AnPac's long-term growth. The Expansive Patent Portfolio is still the competitive advantage for AnPac. Even though AnPac's 1H20 business has been affected by COVID-19, caused by the closing of AnPac's blood sampling points to follow Chinese government rule, we believe AnPac's business growth will be back on track in 2H2020 and see further upside opportunity from current levels.

Risk

- Worse than expected market expansion in China
- Slower than expected application process for NMPA Class III medical device registration certificate
- Continued incurred losses each year

Price Chart



Rating History

AnPac Bio-Medical Science (Biotechnology)

Item #	Date	Research Action	Rating	Price
#1	03/30/2020	Initiation of Coverage	Buy	\$8.00

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AnPac Timeline



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Financial Data

	2017	2018	2019
	12M	12M	12M
Income Statement			
Total revenues	5.69	10.25	10.85
Cancer screening and detection tests (including from related parties)	5.20	9.56	10.38
Physical checkup packages	0.48	0.69	0.46
Cost of revenues	(3.95)	(5.67)	(6.05)
Gross profit	1.73	4.58	4.80
Operating expenses	(42.83)	(48.78)	(94.25)
Selling and marketing expenses (including from related parties)	(6.49)	(9.83)	(13.63)
Research and development expenses	(11.41)	(10.11)	(9.84)
General and administrative expenses	(24.94)	(28.85)	(70.78)
Other operating income	0.18	0.59	0.37
Loss from operations	(40.92)	(43.61)	(89.08)
Non-operating income and expenses	1.61	1.11	(12.76)
Interest expense, net (including from related parties)	(0.34)	(0.93)	(2.61)
Foreign exchange gain / loss, net	0.64	(2.78)	(3.22)
Share of net loss in equity method investments	(0.00)	(0.44)	0.19
Other income, net	1.31	5.26	(7.12)
Net loss before income taxes	(39.31)	(42.49)	(101.84)
Income tax expense / benefit	(0.01)	0.20	0.22
Net loss	(39.32)	(42.30)	(101.62)
Net loss attributable to noncontrolling interests	0.24	0.23	0.56
Net loss attributable to ordinary shareholders	(39.08)	(42.06)	(101.06)
Per share			
Basic	(492.00)	(4.93)	(11.31)
Diluted	(492.00)	(4.93)	(11.31)
Weighted average shares			
Basic	0.08	8.52	8.94
Diluted	0.08	8.52	8.94
Growth (YoY%)			
Total revenues	-	80.27	5.80
Cancer screening and detection tests (including from related parties)	-	83.68	8.62
Physical checkup packages	-	43.48	(33.04)
Cost of revenues	-	(43.45)	(6.61)
Gross profit	-	164.32	4.81
Operating expenses	-	(13.88)	(93.22)
Selling and marketing expenses (including from related parties)	-	(51.42)	(38.73)
Research and development expenses	-	11.39	2.64
General and administrative expenses	-	(15.67)	(145.37)
Other operating income	-	233.15	(37.10)
Loss from operations	-	(6.56)	(104.27)
Non-operating income and expenses	-	(30.89)	(1245.15)
Interest expense, net (including from related parties)	-	(173.67)	(182.05)
Foreign exchange gain / loss, net	-	(531.06)	(15.96)
Share of net loss in equity method investments	-	(14600.00)	-
Other income, net	-	301.53	(235.45)
Net loss before income taxes	-	(8.10)	(139.65)
Income tax expense / benefit	-	-	9.55
Net loss	-	(7.57)	(140.26)
Net loss attributable to noncontrolling interests	-	(4.51)	140.77
Net loss attributable to ordinary shareholders	-	(7.64)	(140.26)

All figures in millions of China Renminbi except per share items.

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	2017	2018	2019
Balance Sheet			
Total assets	60.15	52.76	52.98
Total current assets	17.95	20.85	22.17
Cash and cash equivalents	11.41	12.89	6.13
Advances to suppliers	1.16	2.81	1.09
Accounts receivable, net of allowance for doubtful accounts	1.99	2.75	1.30
Amounts due from related parties	0.28	0.27	0.56
Inventories	0.24	0.06	0.31
Other current assets	2.87	2.08	12.79
Property and equipment, net	18.68	18.14	18.87
Land use rights, net	12.51	1.22	1.19
Intangible assets, net	5.51	5.41	5.20
Goodwill	2.22	2.22	2.22
Long-term investments	2.05	3.46	2.33
Other assets	1.23	1.46	1.00
Total liabilities and shareholders' equity / deficit	60.15	52.76	52.98
Total liabilities	50.65	75.15	68.91
Total current liabilities	35.35	71.44	66.20
Short-term debt	12.50	25.96	38.57
Accounts payable	2.46	1.62	1.80
Advance from customers	1.99	4.31	2.45
Amounts due to related parties	3.08	28.69	4.60
Accrued expenses and other current liabilities	15.33	10.86	18.78
Deferred tax liabilities	1.31	1.22	1.13
Other long-term liabilities	13.99	2.50	1.58
Total shareholders' equity / deficit	9.50	(22.39)	(15.92)
Ordinary shares	0.56	0.57	0.00
Class A ordinary shares	-	-	0.47
Class B ordinary shares	-	-	0.19
Additional paid-in capital	143.06	152.37	257.74
Accumulated deficits	(132.29)	(174.35)	(276.48)
Accumulated other comprehensive loss	(1.77)	(0.98)	2.11
Total AnPac Bio-Medical Science Co., Ltd. shareholders' equity / deficit	9.56	(22.39)	(15.97)
Noncontrolling interests	(0.06)	0.00	0.05
Growth (YoY%)			
Total assets	-	(12.28)	0.42
Total current assets	-	16.17	6.33
Cash and cash equivalents	-	12.92	(52.47)
Advances to suppliers	-	141.77	(61.06)
Accounts receivable, net of allowance for doubtful accounts	-	38.28	(52.89)
Amounts due from related parties	-	(4.61)	106.32
Inventories	-	(74.17)	404.84
Other current assets	-	(27.49)	515.50
Property and equipment, net	-	(2.89)	4.01
Land use rights, net	-	(90.23)	(2.29)
Intangible assets, net	-	(1.82)	(3.81)
Goodwill	-	0.00	0.00
Long-term investments	-	68.83	(32.70)
Other assets	-	18.77	(31.60)
Total liabilities and shareholders' equity / deficit	-	(12.28)	0.42
Total liabilities	-	48.38	(8.31)
Total current liabilities	-	102.09	(7.34)
Short-term debt	-	107.69	48.56
Accounts payable	-	(34.25)	11.25
Advance from customers	-	117.28	(43.19)
Amounts due to related parties	-	832.30	(83.98)
Accrued expenses and other current liabilities	-	(29.15)	72.96
Deferred tax liabilities	-	(6.72)	(7.20)
Other long-term liabilities	-	(82.17)	(36.87)
Total shareholders' equity / deficit	-	(335.79)	28.89
Ordinary shares	-	0.89	(100.00)
Class A ordinary shares	-	-	-
Class B ordinary shares	-	-	-
Additional paid-in capital	-	6.51	69.15
Accumulated deficits	-	(31.80)	(58.57)
Accumulated other comprehensive loss	-	44.95	-
Total AnPac Bio-Medical Science Co., Ltd. shareholders' equity / deficit	-	(334.29)	28.67
Noncontrolling interests	-	-	-

All figures in millions of China Renminbi.

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