研究报告 Research Report

2 Aug 2022

天境生物 I-Mab Biopharma (IMAB US)

受 AZ 终止 NKG2A 单抗 Monalizumab 头颈鳞癌开发影响，市场可能反应过度

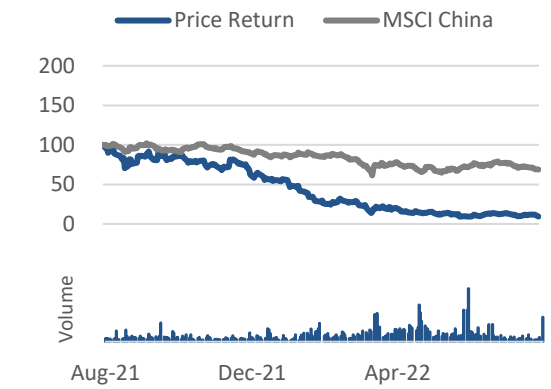
Market May Have Overreacted to AZ Termination of NKG2A mAb Monalizumab Ph3 HNSCC

观点聚焦 Investment Focus

维持优于大市 Maintain OUTPERFORM

评级	优于大市 OUTPERFORM
现价	US$8.53
目标价	US$53.55
MSCI ESG 评级	BBB
来源: MSCI ESG Research LLC. Reproduced by permission; no further distribution	
市值	US$0.70bn
日交易额 (3 个月均值)	US$8.85mn
发行股票数目	82.65mn
自由流通股 (%)	100%
1 年股价最高最低值	US$80.35-US$8.27

注：现价 US$8.53 为 2022 年 8 月 1 日收盘价



资料来源： Factset

	1mth	3mth	12mth
绝对值	-21.6%	-32.0%	-88.8%
绝对值（美元）	-21.6%	-32.0%	-88.8%
相对 MSCI China	3.6%	-5.2%	-52.7%

(Rmb mn)	Dec-21A	Dec-22E	Dec-23E	Dec-24E
营业收入	88	744	1,070	1,983
(+/-)	-94%	746%	44%	85%
净利润	-2,332	-1,311	-1,444	-39
(+/-)	n.m.	n.m.	n.m.	n.m.
全面摊薄 EPS (Rmb)	-13.35	-7.50	-8.27	-0.22
毛利率	47.3%	95.0%	90.0%	90.0%
净资产收益率	-50.8%	-40.0%	-78.8%	-2.2%
市盈率	n.m.	n.m.	n.m.	n.m.

资料来源： 公司信息, HTI

(Please see APPENDIX 1 for English summary)

事件

我们与公司交流昨晚股价大跌原因，公司认为股价受 AZ 终止 NKG2A 单抗 Monalizumab 联用西妥昔单抗治疗 R/R 头颈癌的三期临床 INTERLINK-1 影响（新闻稿）。今天盘前 AZ/Innate 宣布由于没有通过中期无效分析，因此终止 R/R 头颈癌适应症开发，但是仍然会继续开发 NSCLC 同步放化疗后，Monalizumab 联用 PDL1 的临床（PACIFIC-9）。由于 Monalizumab 与 AZ 的 CD73 单抗 Oleclumab 二期 NSCLC 临床同属一个二期临床研究（COAST），市场可能会怀疑 COAST 得到积极数据是因为对照组 PDL1 单药数据较差，提高了 Hazard Ratio。此次担忧类似较早前罗氏 TIGIT 在二期 Skyscraper 临床的 PD-L1 组数据较差而提高了用药组的 Hazard Ratio，而没有达到三期临床主要终点 PFS。

我们认为市场反应过度，NKG2A 单抗临床终止与 CD73 单抗并无关系。首先，终止的药物并非 CD73 单抗。其次，NKG2A 单抗 Monalizumab 终止的适应症并非 NSCLC，AZ 也重申同步放化疗后的 NSCLC PACIFIC-9 研究仍在进行。R/R 头颈癌的三期临床启动也并非基于 COAST 研究，而是基于 NCT02643550 研究。

第三，我们认为 COAST 研究的 PD-L1 单药组中位 PFS 6.3 个月（95% CI，3.7-11.2 个月）、12 个月 PFS 率 33.9%（95% CI，21.2-47.1%），虽然与 PACIFIC 研究的 PD-L1 组 12 个月 PFS 率为 55.9%/中位 PFS 16.8 个月明显更低（图表一），但是 AZ 在 21 年 ESMO 大会上曾经解释过从 propensity score matching 而言，COAST 和 PACIFIC 研究结果可比（图表二）。其次两个研究的基线不同甚至 COAST 研究较差造成差异，比如 COAST 研究的随机分组前最后一次接受放疗时间≥14 天比例较 PACIFIC 研究高（86.6% vs 56.2%），而≥14 天时间的组别预后更差（在 PACIFIC 研究中≥14 天 vs < 14 天的 PFS HR 分别是 0.79 与 0.54）。

估值

维持“优于大市”评级，调整目标价至每 ADS 53.55 美元（前值 $61.08）。我们预计公司 FY22-24 风险调整后的收入分别为人民币 7.44 亿元、10.70 亿元、19.83 亿元（不变）。我们预计公司 FY22-24 净亏损分别为人民币-13.11 亿元、-14.44 亿元、-0.39 亿元（不变）。我们采用 DCF 模型对公司进行估值，WACC 给予 11.7%（不变）。永续增长率取 1.0%（前值 3.0%，下调主要由于发展策略聚焦在后期管线，对其他管线减少投入）得到整体估值 38.55 亿美元，对应目标价每 ADS 53.55 美元。我们维持“优于大市”评级。

风险

ADR 退市风险、CD73 发生海外授权事件的不确定性、风险资产数据读出风险

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表1 K 药、PACIFIC 研究在同步放化疗后的非小细胞肺癌研究数据比较

Endpoint	LUN 14-179 (Pembrolizumab)	PACIFIC[1] (Durvalumab)	PACIFIC[1] (Placebo)
Median Follow-up	18.6 months	14.5 months	14.5 months
Time to Metastatic Disease or Death			
Median	22.4 months	23.2 months	14.6 months
12-month	74.7%	-	-
18-month	60.0%	-	-
Progression Free Survival			
Median	17.0 months	16.8 months	5.6 months
12-month	60.2%	55.9%	35.3%
18-month	49.9%	44.2%	27.0%
24-month	44.6%	-	-

[1]Antonia et al. NEJM. 2017. Nov 16. 1919-1929.

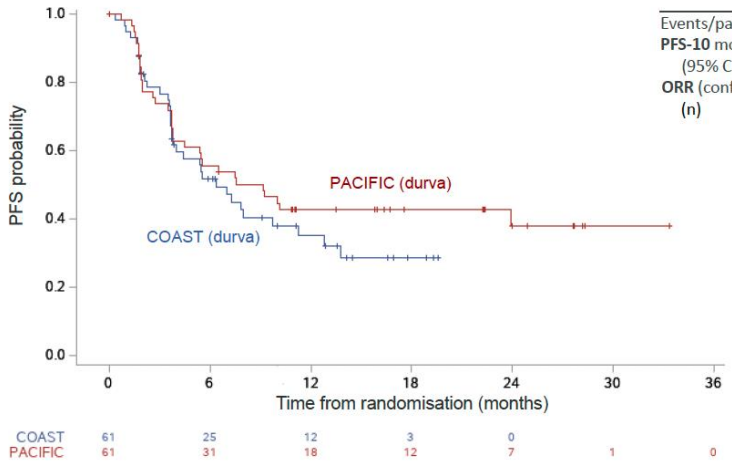
PRESENTED AT: 2018 ASCO ANNUAL MEETING #ASCO18 PRESENTED BY: GREG DURM 25

资料来源：2018 ASCO, HTI

表2 Propensity Score 显示 COAST 与 PACIFIC 研究结果可比

Imfinzi: Propensity score matching of COAST (durvalumab arm) with PACIFIC (durvalumab arm)

- **Matching variables:** Age (<75, ≥75), Race (Asian, Other), Prior therapy (Carboplatin, Cisplatin), Time from last radiation to randomisation (<14 days, ≥14 days), Best response to prior therapies (PR, SD) and Disease stage at entry (IIIA, IIIB, IIIC)



	COAST (D)	PACIFIC (D)
Events/patients, n	32/61	31/60
PFS-10 months	**38.0%**	**44.6%**
(95% CI)	(24.5–51.3%)	(31.3-57.1%)
ORR (conf + unconf), **%**	**24.6%**	**24.6%**
(n)	(15)	(15)

资料来源：AZ Investor Presentation, HTI

DCF 估值模型

表3 DCF 估值模型

RMB mn	FY21	FY22E	FY23E	FY24E	FY25E	FY26E	FY27E	FY28E	FY29E	FY30E	FY31E
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Forecast Year	1	2	3	4	5	6	7	8	9	10	11
Time Factor (fraction of year to next FY end)	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
Sales	**88.0**	**744.5**	**1,069.7**	**1,983.2**	**3,565.7**	**4,625.2**	**6,495.3**	**7,084.5**	**8,779.3**	**8,973.1**	**9,262.9**
... Growth	*-94.3%*	*745.7%*	*43.7%*	*85.4%*	*79.8%*	*29.7%*	*40.4%*	*9.1%*	*23.9%*	*2.2%*	*3.2%*
Gross Profit	41.6	707.2	962.7	1,784.9	3,280.4	4,255.2	5,975.7	6,517.7	8,076.9	8,255.3	8,521.9
... GP Margin	*47.3%*	*95.0%*	*90.0%*	*90.0%*	*92.0%*	*92.0%*	*92.0%*	*92.0%*	*92.0%*	*92.0%*	*92.0%*
SG&A	0.0	0.0	-256.7	-357.0	-748.8	-832.5	-974.3	-850.1	-877.9	-897.3	-926.3
... SG&A Margin	*0.0%*	*0.0%*	*24.0%*	*18.0%*	*21.0%*	*18.0%*	*15.0%*	*12.0%*	*10.0%*	*10.0%*	*10.0%*
Depreciation & Amortisation	4.7	14.4	28.7	37.2	43.8	55.4	71.7	79.4	73.4	69.0	65.5
EBIT	**-2334.7**	**-1281.5**	**-1412.0**	**-38.2**	**663.2**	**1640.2**	**2814.3**	**3492.7**	**4762.2**	**4866.8**	**5023.3**
Add: Amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITA	**-2334.7**	**-1281.5**	**-1412.0**	**-38.2**	**663.2**	**1640.2**	**2814.3**	**3492.7**	**4762.2**	**4866.8**	**5023.3**
... Margin	*-2652.3%*	*-172.1%*	*-132.0%*	*-1.9%*	*18.6%*	*35.5%*	*43.3%*	*49.3%*	*54.2%*	*54.2%*	*54.2%*
... Growth											
Add: Depreciation	4.7	14.4	28.7	37.2	43.8	55.4	71.7	79.4	73.4	69.0	65.5
EBITDA	**-2,330.0**	**-1,267.1**	**-1,383.3**	**-1.0**	**706.9**	**1,695.5**	**2,886.0**	**3,572.1**	**4,835.5**	**4,935.8**	**5,088.8**
... Margin	*-2647.0%*	*-170.2%*	*-129.3%*	*0.0%*	*19.8%*	*36.7%*	*44.4%*	*50.4%*	*55.1%*	*55.0%*	*54.9%*
Less: Tax	3.2	0.0	0.0	0.0	-72.9	-180.4	-309.6	-384.2	-523.8	-535.4	-552.6
Less: Minority Interests	0.0	-29.2	-32.1	-0.9	13.4	33.2	57.0	70.8	96.5	98.6	101.8
Less: Increase of Working Capita	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Less: Capex	-13.2	-111.7	-107.0	-59.5	-107.0	-138.8	-194.9	-35.4	-43.9	-44.9	-46.3
... Capex:Depreciation	*2.8x*	*7.8x*	*3.7x*	*1.6x*	*2.4x*	*2.5x*	*2.7x*	*0.4x*	*0.6x*	*0.7x*	*0.7x*
Less: Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Free Cash Flow	**-2,140.1**	**-1,207.9**	**-1,322.4**	**138.7**	**740.4**	**1,609.6**	**2,638.6**	**3,423.3**	**4,564.3**	**4,654.2**	**4,791.7**
... FCF Growth		*-43.6%*	*9.5%*	*-110.5%*	*433.9%*	*117.4%*	*63.9%*	*29.7%*	*33.3%*	*2.0%*	*3.0%*
PV of FCF	**-1,915.6**	**-967.8**	**-948.5**	**89.0**	**425.5**	**828.0**	**1,215.0**	**1,411.1**	**1,684.1**	**1,537.2**	**1,416.6**

WACC		**DCF Valuation**	
Risk Free Rate	3.0%	Sum of PV of FCF	6,690.3
Market Risk Premium	12.5%	PV of Terminal Value	13,353.4
Equity Beta	0.92	Enterprise Value	20,043.7
Cost of Equity	14.6%	Add: Net Cash FY21	4,052.8
Cost of Debt (Pre-tax)	6.0%	Equity Value	24,096.5
Cost of Debt (After tax)	5.1%	No. of Ord shares (m), fully diluted	72.0
Target Debt weight	30.0%		
Target Equity weight	70.0%	Value per Share, RMB	334.66
Tax Rate	15.0%	FX: RMB/USD	0.16
WACC	**11.7%**	**Terminal Growth** 1.0%	**Value per Share, USD** **$53.55**

资料来源：HTI

财务报表

表4 财务报表

Key ratios	2021A	2022E	2023E	2024E
EPS(RMB)	-13.35	-7.50	-8.27	-0.22
BVPS(RMB)	26.26	18.76	10.49	10.27
Operating cash flow per share(RMB)	-12.05	-5.99	-6.65	1.26
DPS(RMB)	0.00	0.00	0.00	0.00
P/E	n.a.	n.a.	n.a.	n.a.
P/B	4.04	5.66	10.12	10.34
P/S	7.93	4.28	2.38	1.83
EV/EBITDA	-5.06	-8.39	-6.76	-9979.63
Dividned yield	0%	0%	0%	0%
Gross margin	47%	95%	90%	90%
Net margin	-2649%	-176%	-135%	-2%
ROE	-51%	-40%	-79%	-2%
ROA	-41%	-31%	-50%	-1%
ROIC	-26%	-20%	-39%	-1%
Revenue growth	-94%	746%	44%	85%
EBIT growth	-582%	-45%	10%	-97%
Net profit growth	-595%	45%	-10%	97%
Asset/liability ratio	541%	424%	278%	268%
Liquidlity ratio	766%	509%	273%	255%
Quick ratio	762%	505%	264%	238%
Cash ratio	565%	360%	163%	176%
AR days	137	73	73	73
Inventory days	214	214	214	214
Total asset turnover	0.01	0.15	0.30	0.69
Fixed asset turnover	2.48	7.89	5.87	8.53

IS (RMB mn)	2021A	2022E	2023E	2024E
Revenue	**88**	**744**	**1070**	**1983**
COGS	46	37	107	198
GPM (%)	47%	95%	90%	90%
Business tax and surcharges	-3	0	0	0
Tax rate (%)	0%	11%	11%	11%
Operating expense	**2113**	**2010**	**2396**	**1844**
Operating expense ratio (%)	2400%	270%	224%	93%
Selling expense	0	0	257	357
Selling expense ratio (%)	0%	0%	24%	18%
Administrative expense	900	372	428	397
Administrative expense ratio (%)	1022%	50%	40%	20%
R&D expense	1213	1638	1711	1091
R&D expense ratio (%)	1378%	220%	160%	55%
EBIT	-2335	-1281	-1412	-38
Financing expense	0	0	0	0
Financing expense ratio (%)	0%	0%	0%	0%
Assets impairment loss	0	0	0	0
Investment profit	21	21	21	21
Operating profit	**-2071**	**-1303**	**-1433**	**-59**
Exceptional income-net	0	0	0	0
Pre-tax profit	**-2335**	**-1281**	**-1412**	**-38**
EBITDA	-2330	-1267	-1383	-1
Taxation	-3	0	0	0
Tax rate (%)	0%	11%	11%	11%
Deemed dividend to preferred shareholders	0	29	32	1
Net income to ord equity	**-2332**	**-1311**	**-1444**	**-39**

Financial statement (RMB mn)	2021A	2022E	2023E	2024E
Cash	3524	2366	1097	1258
Account receivable	33	149	214	397
Inventory	27	22	63	116
Other current assets	1198	808	463	46
Total current assets	4782	3345	1837	1817
Long-term equity investment				
Tangible assets	158	256	334	356
Construction in progress				
Intangible assets	120	120	120	120
Total non-current assets	848	945	1023	1046
Total assets	**5630**	**4290**	**2860**	**2862**
Short-term debts	0	0	0	0
Account payable	0	34	48	89
Deferred revenue	0	0	0	0
Other current liabilities	624	624	624	624
Total current liabilities	624	658	672	713
Long-term debts	224	224	224	224
Other long-term liabilities	194	131	131	131
Total non-current liabilities	418	355	355	355
Total liabilities	**1042**	**1013**	**1027**	**1068**
Shareholders' equity	4588	3277	1833	1794
Accumulated deficit	-4541	-5852	-7296	-7335
Mezzanine equity	3104	3133	3165	3166
Total liabilities and equities	**5629**	**4290**	**2860**	**2862**

Cash flow (RMB mn)	2021A	2022E	2023E	2024E
Net profit	-2332	-1281	-1412	-38
Deemed dividend to preferred shareholders	0	29	32	1
Depreciation & Amortization	5	14	29	37
Net Interest Expenses / (Income)	-21	-21	-21	-21
Change in working capital	-200	-200	-200	-200
Operating cash flow	**-2106**	**-1046**	**-1162**	**220**
Assets	-13	-112	-107	-59
Investment	0	0	0	0
Others	0	0	0	0
Investment cash flow	**-13**	**-112**	**-107**	**-59**
Increase in debts	224	0	0	0
Proceeds from issue of shares	0	0	0	0
Others	0	0	0	0
Financing cash flow	**224**	**0**	**0**	**0**
Net cash inflow	**-1895**	**-1157**	**-1269**	**161**

资料来源：HTI

APPENDIX 1

Summary

We communicated with the company about the reason for the stock price performance last night. The company believes that the stock price was affected by AZ's termination of the phase III clinical INTERLINK-1 clinical trial of NKG2A monoclonal antibody Monalizumab which combined with cetuximab in the treatment of R/R head and neck cancer (press release). AZ/Innate announced before the market today that they have terminated the development of R/R head and neck cancer indications because it did not pass the interim futility analysis, but will continue to develop the clinical study of monalizumab combined with PDL1 (PACIFIC-9) after concurrent chemoradiotherapy for NSCLC. Since Monalizumab and AZ's CD73 Oleclumab are part of the same Phase II NSCLC clinical study (COAST), the market may suspect that COAST's positive data is due to poor PDL1 single-agent data in the control group, exaggerated the Hazard Ratio. This concern is similar to the earlier Roche TIGIT's poor data in the PD-L1 group of the Phase II Skyscraper clinical trial, which directly leading to failure in Phase III clinical trial.

We believe that the market has overreacted and that the clinical discontinuation of NKG2A mAb has nothing to do with CD73 mAb. First, the discontinued drug was not a CD73 mAb. Secondly, the discontinued indication of NKG2A monoclonal antibody Monalizumab is not NSCLC, and AZ also reiterated that the PACIFIC-9 study of NSCLC after concurrent chemoradiotherapy is still ongoing. The Phase III clinical initiation of R/R head and neck cancer was also not based on the COAST study, but on the NCT02643550 study. Thirdly, although the median PFS in the PD-L1 monotherapy arm of the COAST study was 6.3 months (95% CI, 3.7-11.2 months), and the 12-month PFS rate was 33.9% (95% CI, 21.2-47.1%), which are significantly lower than the 12-month PFS rate of the PD-L1 group in the PACIFIC study 55.9%/median PFS of 16.8 months (Figure 1), AZ explained at the 2021 ESMO conference that from the perspective of propensity score matching, the results of the COAST and PACIFIC studies were comparable (Exhibit 2).

Valuation: Maintain the earnings forecasts and the "Outperform" rating, tuned-down the target price to $53.55 per ADS (previously $61.08). We estimate the company's FY22-24 risk-adjusted revenue to be RMB 744 million, RMB 1.070 billion, and RMB 1.983 billion. The company's FY22-24 net losses are expected to be RMB -1.311 billion, -1.444 billion, and -39 million respectively. We use the DCF model to value the company, with an unchanged WACC of 11.7%. Meanwhile we adjusted the terminal growth assumption from 3% to 1.0% as the company will focus research efforts in core CD47 and CD73, leading to a 12% down in our target price from USD61.08 to USD53.55. The OUTPERFORM rating remains intact.

Risk: ADR delisting risk; uncertainty of out-licensing event for CD73; risk of negative data readout.

附录 APPENDIX

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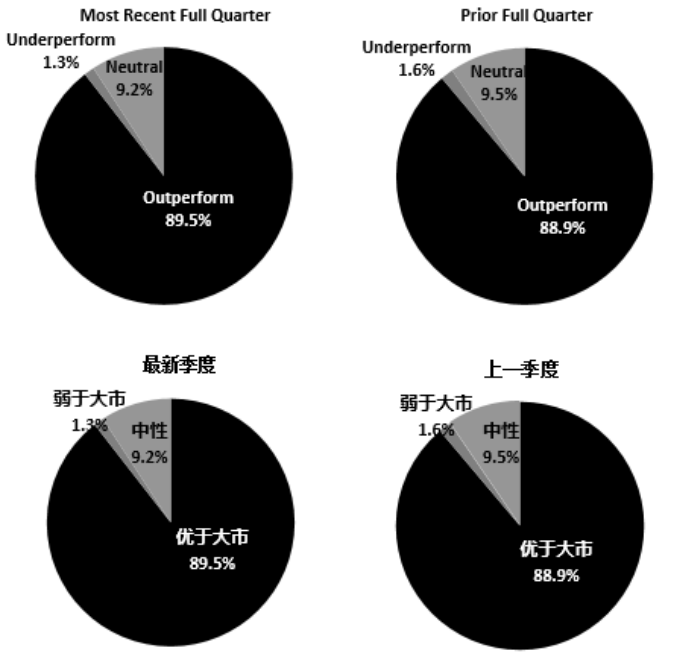

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截至 2022 年 6 月 30 日海通国际股票研究评级分布

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*在每个评级类别里投资银行客户所占的百分比。

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各地股票基准指数：日本 – TOPIX, 韩国 – KOSPI, 台湾 – TAIEX, 印度 – Nifty100; 其他所有中国概念股 – MSCI China.

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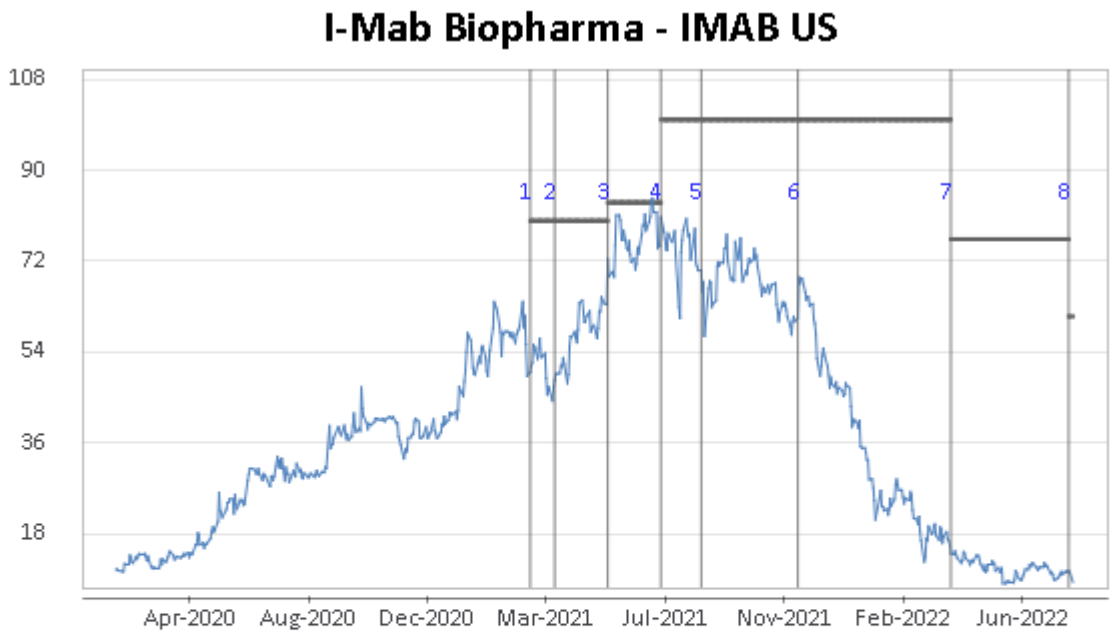
Recommendation Chart



1. 8 Mar 2021 OUTPERFORM at 49.28 target 79.99.
2. 31 Mar 2021 OUTPERFORM at 44.38 target 79.99.
3. 20 May 2021 OUTPERFORM at 63.46 target 83.59.
4. 9 Jul 2021 OUTPERFORM at 74.94 target 100.0.
5. 16 Aug 2021 OUTPERFORM at 70.18 target 100.0.
6. 15 Nov 2021 OUTPERFORM at 61.0 target 100.0.
7. 8 Apr 2022 OUTPERFORM at 16.69 target 76.35.
8. 28 Jul 2022 OUTPERFORM at 10.42 target 61.08.

Source: Company data Bloomberg, HTI estimates