COWEN
AND COMPANY

Pharmaceuticals/Specialty

Versartis

Equity Research

Initiating Coverage

April 15, 2014

Price: $24.56 (04/14/2014)

Price Target: $45.00

OUTPERFORM (1)

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Key Data

Symbol	NASDAQ: VSAR
52-Week Range:	$36.30 - 23.51
Market Cap (MM):	$593.5
Net Debt (MM):	$(12.7)
Cash/Share:	$10.51
Dil. Shares Out (MM):	24.5
Enterprise Value (MM):	$393.5
ROIC:	NA
ROE (LTM):	NA
BV/Share:	$(39.92)
Dividend:	NA

FY (Dec)	2013A	2014E	2015E
Earnings Per Share			
Year	$(41.10)	$(2.65)	$(2.25)
P/E	NM	NM	NM
Revenue (MM)			
Year	$0.0	$0.0	$0.0

Initiation: Potential To Transform The Standard Of Care - Buy Right Here

The Cowen Insight

VRS-317 is a leading long-acting hGH product in development, and the only program with a once-monthly profile, making it a potential transformative asset. Given the potential for VRS-317 to overcome historical issues encountered with long-acting products and capture a significant share of the $3B hGH market, we would add aggressively here. The valuation is simply too compelling.

VRS-317 Is The Only Potential Once-Monthly hGH Product In Development

VRS-317 is in Phase II development for pediatric GHD and adult GHD. VRS-317 is being studied in an ongoing Phase Ib/IIa study, which has had positive Phase Ib/Phase IIa data read out. Importantly, final Phase IIa data results (6-month primary endpoint) will be presented at the ICE/ENDO 2014 Annual Conference in Chicago on June 23. Initial data is suggestive of a once-monthly profile and a solid safety profile. Our consultants suggest that the largest unmet need with respect to current daily hGH therapies is compliance/convenience, as a large percentage of treated patients are significantly noncompliant, resulting in decreased height velocity - or more specifically - a lack of efficacy over time. VRS-317, if successfully developed as a once-monthly product, would be transformative, and alter the standard of care.

Early Clinical Data Has Been Exceedingly Positive

PK results from the Phase Ib portion of the ongoing pediatric GHD study demonstrated that adequate VRS-317 levels remained in circulation through 30 days. Versartis believes that increases of average monthly IGF-1 SDS levels within the target range, which were achieved, are sufficient to support once-monthly dosing. Additionally, our consultants feel that the IGF-1 data to-date "looks very good." When compared to age-matched historical controls, the annualized 3 month HV measurements observed in Phase IIa for VRS-317 were numerically equivalent. We – and our consultants – believe this data is very promising and not only demonstrates proof of concept for VRS-317 as a once-monthly product, but should be predictive of the 6-month HV results to read out in June.

Valuation Poised To Grow From Here

Assuming a de-risking event of positive Phase II data for VRS-317, we arrive at a near-term base case, interim valuation of $45 per share, which is our price target. Further de-risking in Phase III for VRS-317 and assuming commercial success should take the value closer to $65-70. We have included peak sales estimates of $400MM+, $400MM+, and approximately $250MM in the target US, EU, and Japanese pediatric GHD markets. However, we – and our consultants – believe that these peak sales estimates could likely prove conservative if the once-monthly profile of VRS-317 holds up (we believe it will) and no safety issues are observed as use could spread into other indications. Additionally, a potential acquisition value assuming lower operating spending assumptions due to commercial synergies would inflect our valuation discussion closer to $90-100, which given the global product opportunity and its potential transformative nature, appears possible.

Please see addendum of this report for important disclosures.

At A Glance

Our Investment Thesis

Assuming a de-risking event of positive Phase II data for VRS-317, we arrive at a near-term base case, interim valuation of $45 per share, which is our price target. Further de-risking in Phase III for VRS-317 and assuming commercial success should take the value closer to $65-70. We have included peak sales estimates of $400MM+, $400MM+, and approximately $250MM in the target US, EU, and Japanese pediatric GHD markets. However, we – and our consultants – believe that these peak sales estimates could likely prove conservative if the once-monthly profile of VRS-317 holds up (we believe it will) and no safety issues are observed as use could spread into other indications. Additionally, a potential acquisition value assuming lower operating spending assumptions due to commercial synergies would inflect our valuation discussion closer to $90-100, which given the global product opportunity and its potential transformative nature, appears possible.

Forthcoming Catalysts

- June 23, 2014 – 6 month top-line HV Phase IIa VRS-317 results in pediatric GHD
- Early 2015 – Potential pivotal Phase III initiation of VRS-317 in pediatric GHD
- Mid-2015 – Potential pivotal Phase II/III initiation of VRS-317 in adult GHD
- Mid-to-late 2017 – Potential US/EU regulatory filings for VRS-317 in pediatric GHD

Base Case Assumptions

$45 per share based on Phase II VRS-317 clinical success

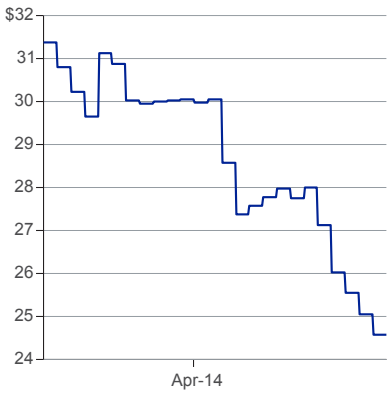
Upside Scenario

$65-70 per share based on Phase III VRS-317 clinical success

Downside Scenario

$5-10 per share based on VRS-317 clinical failure

Price Performance



Source: Bloomberg

Company Description

Versartis is a specialty pharmaceuticals company developing VRS-317, a potential long-acting hGH product with a once-monthly profile for pediatric and adult GHD. The management team has tremendous expertise in the field and VRS-317 appears to be one of the most promising long-acting hGH products in development.

Analyst Top Picks

	Ticker	Price (04/14/2014)	Price Target	Rating
Allergan	AGN	$123.97	$145.00	Outperform
Teva Pharmaceutical	TEVA	$49.95	$52.00	Outperform
Actavis	ACT	$189.13	$255.00	Outperform

Versartis Is Seeking To Alter/Transform The Standard Of Care

Our consultants have stated that Versartis has been the most transparent to date with VRS-317's clinical progress and importantly has experienced no significant safety issues (injection site reactions; lipoatrophy; negative metabolic effects; anti-drug antibodies) that have historically plagued other long-acting hGH products in development. Worth noting, VRS-317 is the only potential once-monthly formulation in development (vs. once-weekly), setting the stage to transform the standard of care.

VRS-317 is Versartis' lead drug candidate, which is a long-acting recombinant human growth hormone (rhGH) in Phase II development for pediatric growth hormone deficiency (GHD) and adult GHD. VRS-317 is being studied in an ongoing Phase Ib/IIa study in pediatric GHD, which has had positive Phase Ib data and an initial Phase IIa data read out, with final Phase IIa data expected in Q2:2014. Specifically, final Phase IIa results (6 month primary endpoint) will be presented at the ICE/ENDO 2014 Annual Conference in Chicago on June 23, which we believe will be a significant value-creating/confirming event. Initial data is suggestive of a once-monthly profile, which would give the product a significant commercial advantage when competing with the current daily hGH therapies. Our consultants suggest that the largest unmet need with respect to current daily therapies is compliance/convenience, as a large percentage of treated patients are significantly non-compliant resulting in decreased height velocity – or stated more clearly – a lack of efficacy over time. VRS-317, if successfully developed as a once-monthly product, would significantly alter the treatment landscape. According to our physician consultants, Versartis appears to be among the companies (Novo Nordisk; Prolor/OPKO Health) leading the field in long-acting hGH development. Our consultants have stated that Versartis has been the most transparent to-date with VRS-317's clinical progress – and importantly – has experienced no significant safety issues (injection site reactions; lipoatrophy; negative metabolic effects; and/or anti-drug antibodies) that have historically plagued other long-acting hGH programs in development. Worth noting, VRS-317 is the only potential once-monthly formulation in development (vs. once-weekly) giving it a potential significant marketing advantage – and setting the stage to transform the standard of care.

Our physician consultants are well aware of VRS-317, believe it is one of the more exciting long-acting hGH programs in development, and believe the management team is by far the most accomplished/experienced in this area.

The Versartis management team appears unparalleled in its experience in this area. Specifically, several of the management team members led or managed clinical trials for the current market-leading hGH products (Norditropin; Nutropin AQ) and were also involved with hGH product manufacturing (Protropin; Nutropin). Additionally, the CEO, Dr. Jeff Cleland, was the team leader through the launch of the only FDA approved long-acting hGH product, Nutropin Depot. Our physician consultants are well aware of the VRS-317 program, believe it is one of the more exciting long-acting hGH programs in development, and believe this management team is of the highest quality in the space. We agree.

Versartis estimates the worldwide daily growth hormone market was approximately $3B in 2012 and has exhibited a 6% average annual growth rate over the past 5 years. By 2018, the worldwide daily hGH market is expected to grow a cumulative 30-40% to $4B+. Importantly, $1.5B, or 50% of the current market is attributed to pediatric GHD, which is VRS-317's initial indication.

The company has retained worldwide rights for VRS-317 and it fully expects to commercialize VRS-317 in the US and we expect a European commercial strategy to be identified in the next 12-24 months. Our hope is that the European rights are retained to provide maximum value if an acquisition were to be contemplated (which although unnecessary to realize significant value is still a highly probable outcome). VRS-317 has Orphan Drug designation, which entitles Versartis to 7 years of market exclusivity in the US and 10 years in the EU. This protection supplements the current VRS-317 intellectual property, which protects the compound to at least 2026 – and potentially to 2030 and beyond – based upon recently filed patents. Versartis estimates the worldwide daily growth hormone market was approximately $3B in 2012 and has exhibited a 6% average annual growth rate over the past 5 years. By 2018, the worldwide daily hGH market is expected to grow a cumulative 30-40%, to $4B+. Importantly, $1.5B, or 50% of the current market is attributed to pediatric GHD, VRS-317's initial indication. The remaining 50% or $1.5B in sales consists of adult GHD, idiopathic short stature (ISS), Turner Syndrome (TS), and others. While Versartis estimates adult GHD, ISS, and TS (excluding other), make up 30% of the overall market or $900MM, our consultants estimate that true adult GHD (on-label) is only

10% of the pediatric market, or $150MM. Of the remaining $1.35B in sales (ISS, TS, and other), our consultants suggest that a very substantial portion of that is due to off-label administration for adults who want to achieve anti-aging or body enhancing effects. We estimate that this could account for up to a third of the total market, or approximately $900MM. This would suggest that the ISS and TS opportunity is around $450MM in in combined sales.

The $3B global market consists of the three major territories: the US, EU, and Japan. Versartis estimates the US and EU markets make up approximately 35-40% of the global market each, or $1.1-1.2B in sales. In the US, the pediatric market is roughly $450MM or just under 40% of the hGH market, while it is an estimated $550MM or 50% in the EU. The Japanese market is about half the size of the US and EU at $600MM, but interestingly, pediatric GHD accounts for almost the entire market, or 80%+. Thus, while it is only 20% of the global GHD market, it is 30% of the pediatric GHD market, which is increasingly relevant to VRS-317's initial indication and ultimately, commercial opportunity.

We – and our consultants – believe that the entrance of a long-acting growth hormone product would be very competitive and not only cannibalize a sizable portion of the existing market, but it would also expand the market. If VRS-317 is successfully developed and approved, we estimate that it could achieve 35% penetration in the existing US and EU hGH markets within 7 years, which would equate to $320MM and $300MM in sales, respectively. In Japan, we believe that a 20%+ penetration of the market within 5 years is certainly achievable resulting in just under $200MM sales. Stated another way, the initial indication could yield nearly $1B in revenue in relatively short window of commercialization.

Due to the availability of daily rhGH therapies for almost three decades, combined with the inability for drug companies to successfully develop and commercialize new, long-acting rhGH therapies, the worldwide hGH market is well-established, undifferentiated, and highly fragmented. A couple of the early hGH adopters, Novo Nordisk and Pfizer, split >50% of the worldwide market, while the remaining <50% is split by Teva, Genentech/Roche, Merck, Sandoz, and Lilly. Since the clinical efficacy of these daily hGH therapies is largely equivalent, competition within the marketplace is fierce and based upon tertiary issues like company history/reputation, service, and device innovation. We – and our consultants – believe that the entrance of a long-acting growth hormone product would be very competitive and not only cannibalize a sizable portion of the existing market, but it would also expand the market through increased product attractiveness to patients and improved compliance. If VRS-317 is successfully developed and approved, we estimate that it could achieve 35% penetration in the existing US and EU hGH markets within 7 years, which would equate to $320MM and $300MM in sales, respectively. In Japan, we believe that a 20%+ penetration of the market within 5 years is certainly achievable resulting in just under $200MM sales. Stated another way, the initial indication could yield nearly $1B in revenue in a relatively short window of commercialization.

Figure 1 Worldwide Pediatric GHD Market Build

US PEDIATRIC GHD MARKET BUILD

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Nutropin (AQ)														
US Market Share	27%	26%	26%	25%	26%	23%	22%	20%	18%	17%	17%	16%		- Market leader in the US
Estimated Patients ('000)	5.6	5.7	5.7	5.6	5.6	5.4	5.5	5.3	5.2	5.2	5.0	4.9		
Average Price Per Year	$21	$22	$23	$23	$24	$25	$26	$26	$27	$28	$29	$30		- Based upon NuSpin 20 dose
Estimated US Ped Sales ($MM)	$120	$125	$130	$130	$135	$135	$140	$140	$140	$145	$145	$145	+1%	- Assumes 50% pediatric
Genotropin														
US Market Share	19%	19%	18%	18%	17%	17%	16%	16%	16%	16%	14%	14%		
Estimated Patients ('000)	3.1	3.0	2.8	2.7	2.4	2.4	2.1	2.1	2.0	2.0	1.8	1.7		
Average Price Per Year	$27	$28	$29	$30	$31	$32	$33	$34	$35	$36	$37	$38		- Based upon 0.6 mg dose MiniQuick Pen
Estimated US Ped Sales ($MM)	$85	$85	$80	$80	$75	$75	$70	$70	$70	$70	$65	$65	-3%	- Assumes 50% pediatric
Humatrope														
US Market Share	16%	16%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%		
Estimated Patients ('000)	2.7	2.7	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.2	2.2	2.1		
Average Price Per Year	$26	$26	$27	$28	$29	$30	$31	$31	$32	$33	$34	$35		- Based upon 24 mg dose
Estimated US Ped Sales ($MM)	$70	$70	$75	$75	$75	$75	$75	$75	$75	$75	$75	$75	+1%	- Assumes 50% pediatric
Norditropin Flexpro (Nordiflex)														
US Market Share	17%	18%	19%	20%	21%	22%	23%	24%	26%	26%	27%	28%		
Estimated Patients ('000)	4.8	4.9	5.1	5.2	5.4	5.5	5.6	5.7	5.8	5.6	5.7	5.8		
Average Price Per Year	$16	$16	$17	$17	$18	$18	$19	$19	$20	$20	$21	$22		- Based upon 15 mg Flexpro dose
Estimated US Ped Sales ($MM)	$75	$80	$85	$90	$95	$100	$105	$110	$115	$115	$120	$125	+5%	- Assumes 50% pediatric
VRS-317														
US Market Share						**7%**	**15%**	**21%**	**26%**	**30%**	**33%**	**35%**		- Conservatively assumes 35% penetration within 7 years
Estimated Patients ('000)						**1.3**	**3.2**	**4.5**	**5.8**	**6.9**	**7.6**	**8.0**		
Average Price Per Year						**$30**	**$32**	**$33**	**$35**	**$36**	**$38**	**$40**		- Priced at parity to market leading daily therapies
Estimated US Ped Sales ($MM)						**$40**	**$100**	**$150**	**$200**	**$250**	**$290**	**$320**	**+41%**	- 2018 US launch
Other Daily hGH Therapies														
US Market Share	22%	24%	25%	26%	28%	26%	25%	23%	22%	21%	21%	20%		
Estimated Patients ('000)	4.0	4.5	4.7	4.9	5.2	5.2	5.4	5.4	5.4	5.4	5.4	5.3		
Average Price Per Year	$25	$26	$27	$27	$28	$29	$30	$31	$32	$33	$34	$35		- On the high end of daily hGH therapies
Estimated US Ped Sales ($MM)	$100	$115	$125	$135	$145	$150	$160	$165	$170	$175	$180	$185	+5%	- Other, newer hGH products gaining share
Total US Ped Patients ('000)	**20.2**	**20.8**	**21.1**	**21.1**	**21.2**	**22.3**	**24.2**	**25.4**	**26.4**	**27.2**	**27.6**	**27.8**	**+3%**	**- Treated patients increase with long-acting therapies**
Total US Ped Market Sales ($MM)	**$450**	**$475**	**$495**	**$510**	**$525**	**$575**	**$650**	**$710**	**$770**	**$830**	**$875**	**$915**	**+7%**	**- Long-acting therapies to expand the market**
% Growth		**6%**	**4%**	**3%**	**3%**	**10%**	**13%**	**9%**	**8%**	**8%**	**5%**	**5%**		**- Market growth coming from approval of new agents**

EU PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total EU Ped Market Sales ($MM)	$550	$580	$610	$640	$670	$705	$735	$765	$795	$820	$845	$870	+4%	- EU market experiencing modest growth
% Growth		5%	5%	5%	5%	5%	4%	4%	4%	3%	3%	3%		
VRS-317														
EU Market Share						**5.0%**	**15.0%**	**20.0%**	**25.0%**	**30.0%**	**33.0%**	**35.0%**		- Conservatively assumes 35% penetration within 7 years
Estimated EU Ped Sales ($MM)						**$40**	**$110**	**$150**	**$200**	**$250**	**$280**	**$300**	**+40%**	- 2018 EU launch
Other Daily hGH Therapies														
EU Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	80.0%	75.0%	70.0%	67.0%	65.0%		
Estimated EU Ped Sales ($MM)	$550	$575	$600	$650	$675	$675	$625	$600	$600	$575	$575	$575	**+0%**	

JAPAN PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total Japan Ped Market Sales ($MM)	$450	$480	$515	$550	$585	$620	$655	$690	$725	$760	$790	$820	+6%	- More growth to come from new therapies with better efficacy
% Growth		7%	7%	7%	6%	6%	6%	5%	5%	5%	4%	4%		
VRS-317														
Japan Market Share								**5.0%**	**15.0%**	**18.0%**	**20.0%**	**22.0%**		- Conservatively assumes 20%+ penetration within 5 years
Estimated Japanese Ped Sales ($MM)								**$30**	**$110**	**$140**	**$160**	**$180**	**+57%**	- Potential 2020 Japan launch
Other Daily hGH Therapies														
Japan Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	82.0%	80.0%	78.0%		- Current therapies don't have great efficacy
Estimated Japan Ped Sales ($MM)	$450	$475	$525	$550	$575	$625	$650	$650	$625	$625	$625	$650	+3%	

WORLDWIDE PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total WW Ped Market Sales ($MM)	$1,450	$1,535	$1,620	$1,700	$1,780	$1,900	$2,040	$2,165	$2,290	$2,410	$2,510	$2,605	+5%	- Continued growth to come from long-acting therapies
% Growth		6%	6%	5%	5%	7%	7%	6%	6%	5%	4%	4%		

Source: Cowen and Company; IMS; PriceRx

Early VRS-317 Clinical Data Is Supportive Of Once-Monthly Dosing

PK results from the completed Phase Ib portion of the ongoing pediatric GHD study demonstrated that adequate VRS-317 levels remained in circulation through 30 days. A single dose of VRS-317 between 4-6 mg/kg was also enough to achieve the target range of a 1.2-1.6 increase in average monthly IGF-1 SDS levels. Versartis believes that increases of average monthly IGF-1 SDS levels within the target range, which were

achieved, are sufficient to support monthly dosing. Additionally, our physician consultants believe that the IGF-1 data to-date "looks very good." Based upon the PK and IGF-1 results described above, Versartis selected the 5 mg/kg VRS-317 dose to go forward into the Phase IIa portion of the ongoing study. The 5 mg/kg VRS-317 dose is equivalent to 30 µg/kg/day of current daily rhGH therapy. This is somewhere in between the labeled dosing ranges for most of the daily hGH products and lower than the average European (33 µg/kg/day) and US (43 µg/kg/day) doses observed in practice. The company believes this dose should allow for minimal safety and tolerability risk – and avoid overexposure of elevated IGF-1 levels.

We – and our consultants – believe this initial data is very promising and not only demonstrates proof of concept for VRS-317 as a once-monthly product, but should be predictive of the 6-month HV results to read out in June.

Preliminary 3-month height velocity (HV) results have been reported for the ongoing Phase IIa portion of the study by Versartis. When compared to age-matched historical controls that were generated from the KIGS Database (~3,000 patients) of 12-month HV measurements from daily 33 µg/kg/day hGH therapy (European dose), the annualized HV measurements (from 3 months) of all three VRS-317 dose regimen cohorts were numerically equivalent. We – and our consultants – believe this initial data is very promising and not only demonstrates proof of concept for VRS-317 as a once-monthly product, but should be predictive of the 6-month HV results to read out in June.

Assuming the final Phase IIa data looks good and a Phase III study is initiated in early 2015, potential interim 6-month mean height velocity (HV) results could be available in 2016 with top-line 12-month mean HV results in the first half of 2017. With this timeline, we would assume that a VRS-317 NDA filing could occur in the US mid-to-late 2017 with an approval and launch in mid-2018.

If the final 6-month Phase IIa results are successful in June – which we think is a strong likelihood given the discussion above – they will form the basis of the dosing regimen to be used in the Phase III registration study that can begin as soon as early 2015. The proposed future Phase III clinical trial design for pediatric GHD will be similar to registration studies conducted for the most recently approved hGH products (Sandoz' and Biopartners' Omnitrope and Valtropin registration studies, respectively). VRS-317 has a relatively simple and well-defined clinical development and regulatory process. For approval, a single dose-finding trial (ongoing Phase Ib/IIa) is required along with a Phase III trial. Assuming the final Phase IIa data looks good, and a Phase III study is initiated in early 2015, potential interim 6-month mean height velocity (HV) results could be available in 2016 with top-line 12 month mean HV results in the first half of 2017. With this timeline, we would assume that a VRS-317 NDA filing could occur in the US mid-to-late 2017 with an approval and launch in mid-2018. We believe the European development program could progress on a similar timeframe. Worth noting, the future Phase III pivotal US/Canadian/EU study may be used in conjunction with a bridging study to support regulatory approval at a later time point in Japan (we estimate 2020).

The future expected catalysts to occur for Versartis are:

- June 23, 2014 – 6 month top-line HV Phase IIa VRS-317 results in pediatric GHD at the ICE/ENDO Conference in Chicago (we suspect Prolor/OPKO and Ascendis may also present Phase II pediatric GHD results)
- 2H:14 – Potential unveiling of a new preclinical asset employing the XTEN technology
- Early 2015 – Potential pivotal Phase III initiation of VRS-317 in pediatric GHD
- Mid-2015 – Potential pivotal Phase II/III initiation of VRS-317 in adult GHD
- 2016 – Potential interim 6-month mean HV results from pivotal Phase III trial of VRS-317 in pediatric GHD
- 1H:2017 – Potential top-line 12 month mean HV results from pivotal Phase III trial of VRS-317 in pediatric GHD

- Mid-to-late 2017 – Potential US/EU regulatory filings for VRS-317
- Mid-2018 – Potential US/EU regulatory approval and launch of VRS-317 in pediatric GHD

Valuation Looks Compelling With Multiple Events Likely Driving It Higher

Assuming clinical and commercial success for VRS-317, we arrived at a base case valuation of $45-70 per share. This valuation range is predicated on the de-risking of VRS-317 as future Phase IIa and Phase III clinical results read out.

Assuming a de-risking event of positive Phase IIa data for VRS-317 in June, we arrive at a near-term base case, interim valuation of $45 per share. Further de-risking in Phase III for VRS-317 and assuming commercial success should take the value closer to $70. We have included peak sales estimates of $400MM+, $400MM+, and approximately $250MM in the target US, EU, and Japanese pediatric GHD markets. We – and our consultants – believe that these peak sales estimates could likely prove conservative if the once-monthly profile of VRS-317 holds up (we believe it will) and no safety issues are observed. Additionally, our consultants believe that use will spread into other indications (adult GHD, ISS, Turner, etc.) upon pediatric GHD approval and as doctors become more comfortable with use of the product. We have also taken into account the potential 2030 patent expiration and possible sales erosion by biosimilar products. Additionally, on the following pages we provide a potential acquisition value following de-risking of the Phase III results, which would lower our operating spending assumptions assuming already in-place sales forces. This would inflect our valuation discussion closer to $90-100, which given the global product opportunity and its potential transformative nature, appears possible.

But first, as indicated above, upon successful Phase IIa results in June – which we and our consultants believe are likely – and therefore would serve as de-risking of the clinical program, we believe Versartis' valuation should inflect to $45 per share. On the following page, we have published our base-case DCF scenario post successful Phase IIa results.

And analyzed another way, the current $25 share price and sub-$400MM enterprise valuation for Versartis appears to be very well protected when looking at the Prolor take-out value. For perspective, Prolor was bought by OPKO Health in April, 2013 for $480MM, which we can assume is largely attributed to their hGH product in Phase II development in pediatric GHD and Phase III for adult GHD. We would note that this was a once-weekly product as opposed to a potential once-monthly like VRS-317 with fairly little disclosed clinical data. This should provide a current valuation floor.

Figure 2 Post Positive Phase II Results, DCF Suggest $45 Per Share

Assumptions:		*Output:*	
Terminal Growth	2%	Enterprise Value	$1,095
Increase in WC	3%	**Estimated Share Price**	**$45**
Discount Rate	***11%***	Debt	$0
Share Count (MM)	24.5	Cash	$75
		Equity Value	**$1,020**
		Wacc:	11%

Versartis DCF

	2012	2013	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P	
Total Revenues		$0.0	$0.0	$0.0	$0.0	$0.0	$80.0	$210.0	$330.0	$510.0	$640.0	$730.0	$800.0	$860.0	$900.0	$945.0	$990.0	$1,025.0	$1,060.0	$775.0	$500.0	
% Change								+163%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%	
Cost of Goods		$0.0	$0.0	$0.0	$0.0	$0.0	$8.0	$21.0	$33.0	$51.0	$64.0	$73.0	$80.0	$86.0	$90.0	$94.5	$99.0	$102.5	$106.0	$77.5	$50.0	
Gross Profit		$0.0	$0.0	$0.0	$0.0	$0.0	$72.0	$189.0	$297.0	$459.0	$576.0	$657.0	$720.0	$774.0	$810.0	$850.5	$891.0	$922.5	$954.0	$697.5	$450.0	
Gross Margin - Total		NM	NM	NM	NM	NM	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	
SG&A		$4.4	$12.0	$15.0	$25.0	$50.0	$75.0	$115.0	$130.0	$150.0	$170.0	$190.0	$210.0	$230.0	$250.0	$270.0	$290.0	$310.0	$330.0	$250.0	$100.0	
% of Revs		NM	NM	NM	NM	NM	93.8%	54.8%	39.4%	29.4%	26.6%	26.0%	26.3%	26.7%	27.8%	28.6%	29.3%	30.2%	31.1%	32.3%	20.0%	
R&D		$14.9	$38.0	$40.0	$45.0	$50.0	$75.0	$74.0	$50.0	$50.0	$45.0	$45.0	$40.0	$40.0	$35.0	$35.0	$35.0	$35.0	$35.0	$35.0	$20.0	
% of Revs		NM	NM	NM	NM	NM	93.8%	35.2%	15.2%	9.8%	7.0%	6.2%	5.0%	4.7%	3.9%	3.7%	3.5%	3.4%	3.3%	4.5%	4.0%	
Operating Expenses		$19.3	$50.0	$55.0	$70.0	$100.0	$150.0	$189.0	$180.0	$200.0	$215.0	$235.0	$250.0	$270.0	$285.0	$305.0	$325.0	$345.0	$365.0	$285.0	$120.0	
% of Revenues		NM	NM	NM	NM	NM	187.5%	90.0%	54.5%	39.2%	33.6%	32.2%	31.3%	31.4%	31.7%	32.3%	32.8%	33.7%	34.4%	36.8%	24.0%	
Operating Income		($19.3)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	
% Operating Margin		NM	NM	NM	NM	NM	-97.5%	0.0%	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%	
Other Income		0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Adjusted EBIT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	
% of Revs		NM	NM	NM	NM	NM	-97.5%	0.0%	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%	
Taxes									$41.0	$90.7	$126.4	$147.7	$164.5	$176.4	$183.8	$190.9	$198.1	$202.1	$206.2	$144.4	$115.5	
Income Tax Rate									35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	
NOPAT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$76.1	$168.4	$234.7	$274.3	$305.5	$327.6	$341.3	$354.6	$367.9	$375.4	$382.9	$268.1	$214.5	
Adjustments:																						Terminal
Capex		($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	
Depreciation & Amortization		$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	
Change In Working Capital		($5.0)	($5.2)	($5.3)	($5.5)	($5.6)	($5.8)	($6.0)	($6.1)	($6.3)	($6.5)	($6.7)	($6.9)	($7.1)	($7.3)	($7.6)	($7.8)	($8.0)	($8.3)	($8.5)	($8.8)	
Free Cash Flow		($23.4)	($55.2)	($60.3)	($75.5)	($105.6)	($83.8)	($6.0)	$69.9	$162.0	$228.1	$267.6	$298.6	$320.5	$333.9	$347.0	$360.1	$367.4	$374.6	$259.6	$205.7	$2,420.0

Source: Cowen and Company

Upon successful pivotal Phase III pediatric GHD results in 2016/2017 – and therefore further de-risking of the clinical program – we believe Versartis' valuation should inflect to $65-70 per share. In fact, given the very strong correlation between 3, 6, and 12 month HV results (primary endpoint in Phase II and Phase III trials), we would argue that the valuation could drift above $45 and towards $65-70 per share following successful Phase IIa results.

On the following page, we have published our base-case DCF scenario post successful Phase III results.

Figure 3 Post Positive Phase III Results, DCF Suggest $65-70 Per Share

Assumptions:		*Output:*	
Terminal Growth	2%	Enterprise Value	$1,620
Increase in WC	3%	**Estimated Share Price**	**$65**
Discount Rate	***9%***	Debt	$0
Share Count (MM)	24.5	Cash	$75
		Equity Value	**$1,545**
		Wacc:	9%

Versartis DCF

	2012	2013	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P	
Total Revenues		$0.0	$0.0	$0.0	$0.0	$0.0	$80.0	$210.0	$330.0	$510.0	$640.0	$730.0	$800.0	$860.0	$900.0	$945.0	$990.0	$1,025.0	$1,060.0	$775.0	$500.0	
% Change								+163%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%	
Cost of Goods		$0.0	$0.0	$0.0	$0.0	$0.0	$8.0	$21.0	$33.0	$51.0	$64.0	$73.0	$80.0	$86.0	$90.0	$94.5	$99.0	$102.5	$106.0	$77.5	$50.0	
Gross Profit		$0.0	$0.0	$0.0	$0.0	$0.0	$72.0	$189.0	$297.0	$459.0	$576.0	$657.0	$720.0	$774.0	$810.0	$850.5	$891.0	$922.5	$954.0	$697.5	$450.0	
Gross Margin - Total		NM	NM	NM	NM	NM	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	
SG&A		$4.4	$12.0	$15.0	$25.0	$50.0	$75.0	$115.0	$130.0	$150.0	$170.0	$190.0	$210.0	$230.0	$250.0	$270.0	$290.0	$310.0	$330.0	$250.0	$100.0	
% of Revs		NM	NM	NM	NM	NM	93.8%	54.8%	39.4%	29.4%	26.6%	26.0%	26.3%	26.7%	27.8%	28.6%	29.3%	30.2%	31.1%	32.3%	20.0%	
R&D		$14.9	$38.0	$40.0	$45.0	$50.0	$75.0	$74.0	$50.0	$50.0	$45.0	$45.0	$40.0	$40.0	$35.0	$35.0	$35.0	$35.0	$35.0	$35.0	$20.0	
% of Revs		NM	NM	NM	NM	NM	93.8%	35.2%	15.2%	9.8%	7.0%	6.2%	5.0%	4.7%	3.9%	3.7%	3.5%	3.4%	3.3%	4.5%	4.0%	
Operating Expenses		$19.3	$50.0	$55.0	$70.0	$100.0	$150.0	$189.0	$180.0	$200.0	$215.0	$235.0	$250.0	$270.0	$285.0	$305.0	$325.0	$345.0	$365.0	$285.0	$120.0	
% of Revenues		NM	NM	NM	NM	NM	187.5%	90.0%	54.5%	39.2%	33.6%	32.2%	31.3%	31.4%	31.7%	32.3%	32.8%	33.7%	34.4%	36.8%	24.0%	
Operating Income		($19.3)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	
% Operating Margin		NM	NM	NM	NM	NM	-97.5%	0.0%	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%	
Other Income		0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Adjusted EBIT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	
% of Revs		NM	NM	NM	NM	NM	-97.5%	0.0%	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%	
Taxes									$41.0	$90.7	$126.4	$147.7	$164.5	$176.4	$183.8	$190.9	$198.1	$202.1	$206.2	$144.4	$115.5	
Income Tax Rate									35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	
NOPAT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$76.1	$168.4	$234.7	$274.3	$305.5	$327.6	$341.3	$354.6	$367.9	$375.4	$382.9	$268.1	$214.5	
Adjustments:																						Terminal
Capex		($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	
Depreciation & Amortization		$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	
Change In Working Capital		($5.0)	($5.2)	($5.3)	($5.5)	($5.6)	($5.8)	($6.0)	($6.1)	($6.3)	($6.5)	($6.7)	($6.9)	($7.1)	($7.3)	($7.6)	($7.8)	($8.0)	($8.3)	($8.5)	($8.8)	
Free Cash Flow		($23.4)	($55.2)	($60.3)	($75.5)	($105.6)	($83.8)	($6.0)	$69.9	$162.0	$228.1	$267.6	$298.6	$320.5	$333.9	$347.0	$360.1	$367.4	$374.6	$259.6	$205.7	$3,165.0

Source: Cowen and Company

Quite simply, we believe significant hGH market players like Novo Nordisk, Pfizer, Lilly, Genetech/Roche, and Teva, will look to add a long-acting product to extend their hGH franchises if unable or unsuccessful in developing one – which we believe is likely.

Given the size of the established hGH market – which is estimated to be $4B by 2018 when VRS-317 could launch – and the inability of the major players to successfully develop and commercialize long-acting hGH therapies, we believe Versartis could eventually be a prime acquisition candidate. Quite simply, we believe significant hGH market players like Novo Nordisk, Pfizer, Lilly, Genetech/Roche, and Teva, will look to add a long-acting product to extend their hGH franchises if unable or unsuccessful in developing one – which we believe is likely. For example, Novo Nordisk has previously cancelled a PEGylated long-acting program due to safety issues and the company's most recent long-acting program also appears to have concerning safety issues (QTc prolongation). Therefore, if the company discontinues this program – which could be likely given their history of developing long-acting hGH products – we see Versartis as an ideal acquisition candidate. If we remove the necessary spending burden of building and maintain a sales force from our model, our DCF inflects to an estimated $80-90 per share assuming Phase III success and commercialization. We would also note that each of these valuation parameters exclude any additional pipeline success (second XTEN product to be disclosed), while still attributing some degree of R&D spending. Complete removing development spending in these scenarios (and attributing no pipeline success) adds another $10+ per share. Given our belief in the likelihood of Phase II/III clinical success – combined with the corresponding valuations on the likely commercial outcomes – we would be adding VSAR shares at these levels.

If we remove the necessary spending burden of building and maintain a sales force from our model, our DCF inflects to an estimated $80-90 per share assuming Phase II and Phase III clinical success.

On the following page, we have published our acquisition scenario DCF.

Figure 4 In An Acquisition Scenario, DCF Suggests $80-90 Per Share

Assumptions:		*Output:*	
Terminal Growth	2%	Enterprise Value	$2,055
Increase in WC	3%	**Estimated Share Price**	**$85**
Discount Rate	***9%***	Debt	$0
Share Count (MM)	24.5	Cash	$75
		Equity Value	**$1,980**
		Wacc:	9%

Versartis DCF

	2012	2013	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P	2031P	2032P	
Total Revenues		$0.0	$0.0	$0.0	$0.0	$0.0	$80.0	$210.0	$330.0	$510.0	$640.0	$730.0	$800.0	$860.0	$900.0	$945.0	$990.0	$1,025.0	$1,060.0	$775.0	$500.0	
% Change								+163%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%	
Cost of Goods		$0.0	$0.0	$0.0	$0.0	$0.0	$8.0	$21.0	$33.0	$51.0	$64.0	$73.0	$80.0	$86.0	$90.0	$94.5	$99.0	$102.5	$106.0	$77.5	$50.0	
Gross Profit		$0.0	$0.0	$0.0	$0.0	$0.0	$72.0	$189.0	$297.0	$459.0	$576.0	$657.0	$720.0	$774.0	$810.0	$850.5	$891.0	$922.5	$954.0	$697.5	$450.0	
Gross Margin - Total		NM	NM	NM	NM	NM	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	
SG&A		$4.4	$12.0	$15.0	$25.0	$50.0	***$40.0***	***$50.0***	***$65.0***	***$75.0***	***$85.0***	***$115.0***	***$135.0***	***$155.0***	***$175.0***	***$195.0***	***$215.0***	***$235.0***	***$255.0***	***$175.0***	***$50.0***	
% of Revs		NM	NM	NM	NM	NM	50.0%	23.8%	19.7%	14.7%	13.3%	15.8%	16.9%	18.0%	19.4%	20.6%	21.7%	22.9%	24.1%	22.6%	10.0%	
R&D		$14.9	$38.0	$40.0	$45.0	$50.0	$75.0	$74.0	***$40.0***	***$40.0***	***$38.0***	***$35.0***	***$30.0***	***$30.0***	***$25.0***	***$25.0***	***$25.0***	***$25.0***	***$25.0***	***$25.0***	***$10.0***	
% of Revs		NM	NM	NM	NM	NM	93.8%	35.2%	12.1%	7.8%	5.5%	4.8%	3.8%	3.5%	2.8%	2.6%	2.5%	2.4%	2.4%	3.2%	2.0%	
Operating Expenses		$19.3	$50.0	$55.0	$70.0	$100.0	$115.0	$124.0	$105.0	$115.0	$120.0	$150.0	$165.0	$185.0	$200.0	$220.0	$240.0	$260.0	$280.0	$200.0	$60.0	
% of Revenues		NM	NM	NM	NM	NM	143.8%	59.0%	31.8%	22.5%	18.8%	20.5%	20.6%	21.5%	22.2%	23.3%	24.2%	25.4%	26.4%	25.8%	12.0%	
Operating Income		($19.3)	($50.0)	($55.0)	($70.0)	($100.0)	($43.0)	$65.0	$192.0	$344.0	$456.0	$507.0	$555.0	$589.0	$610.0	$630.5	$651.0	$662.5	$674.0	$497.5	$390.0	
% Operating Margin		NM	NM	NM	NM	NM	-53.8%	31.0%	58.2%	67.5%	71.3%	69.5%	69.4%	68.5%	67.8%	66.7%	65.8%	64.6%	63.6%	64.2%	78.0%	
Other Income		0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Adjusted EBIT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($43.0)	$65.0	$192.0	$344.0	$456.0	$507.0	$555.0	$589.0	$610.0	$630.5	$651.0	$662.5	$674.0	$497.5	$390.0	
% of Revs		NM	NM	NM	NM	NM	-53.8%	31.0%	58.2%	67.5%	71.3%	69.5%	69.4%	68.5%	67.8%	66.7%	65.8%	64.6%	63.6%	64.2%	78.0%	
Taxes									$67.2	$120.4	$159.6	$177.5	$194.3	$206.2	$213.5	$220.7	$227.9	$231.9	$235.9	$174.1	$136.5	
Income Tax Rate									35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	
NOPAT		($18.4)	($50.0)	($55.0)	($70.0)	($100.0)	($43.0)	$65.0	$124.8	$223.6	$296.4	$329.6	$360.8	$382.9	$396.5	$409.8	$423.2	$430.6	$438.1	$323.4	$253.5	
Adjustments:																						Terminal
Capex		($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	($5.0)	
Depreciation & Amortization		$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	$5.0	
Change In Working Capital		($5.0)	($5.2)	($5.3)	($5.5)	($5.6)	($5.8)	($6.0)	($6.1)	($6.3)	($6.5)	($6.7)	($6.9)	($7.1)	($7.3)	($7.6)	($7.8)	($8.0)	($8.3)	($8.5)	($8.8)	
Free Cash Flow		($23.4)	($55.2)	($60.3)	($75.5)	($105.6)	($48.8)	$59.0	$118.7	$217.3	$289.9	$322.8	$353.8	$375.7	$389.2	$402.3	$415.4	$422.6	$429.8	$314.9	$244.7	$3,765.0

Source: Cowen and Company

VRS-317 To Target Growth Disorders

Assuming the final Phase IIa data looks good, a Phase III study will be initiated in early 2015 with potential interim 6-month mean height velocity (HV) results in 2016 and top-line 12-month mean HV results in the first half of 2017.

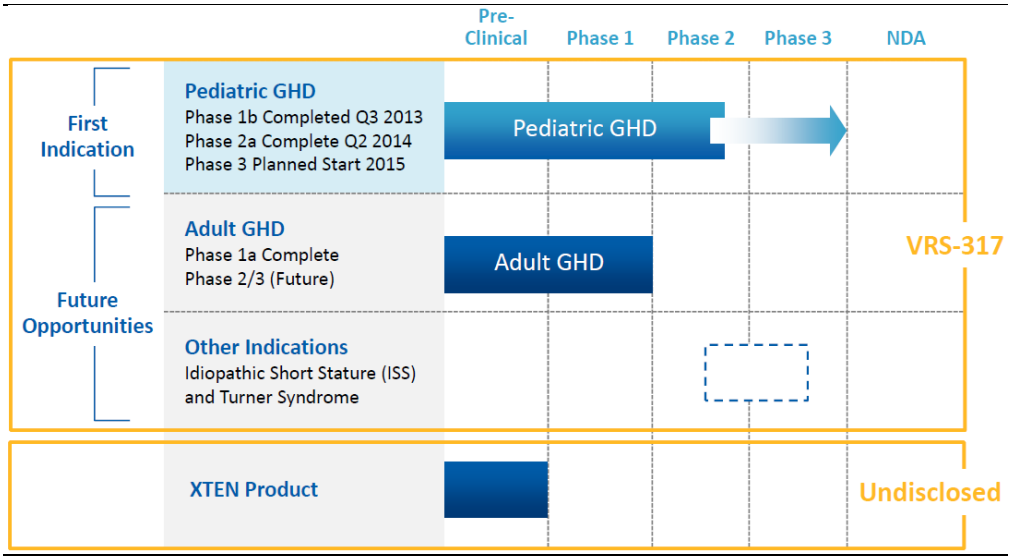
VRS-317 is Versartis' lead drug candidate, which is a long-acting recombinant human growth hormone (rhGH) in Phase II development for pediatric growth hormone deficiency (GHD). VRS-317 is being studied in an ongoing Phase Ib/IIa study, which has had positive Phase Ib data and initial Phase IIa data read out – final Phase IIa data is expected this quarter and the results (6-month primary endpoint) will be presented at the ICE/ENDO 2014 Annual Conference in Chicago on June 23. VRS-317 has a relatively simple and straightforward clinical development and regulatory process. For approval, a single-dose finding trial (ongoing Phase I/IIa) is required along with a Phase III trial. Assuming the final Phase IIa data looks good, a Phase III study will be initiated in early 2015 with potential interim 6-month mean height velocity (HV) results in 2016 and top-line 12-month mean HV results in the first half of 2017.

Interestingly, our physician consultants believe that approval of VRS-317 in pediatric GHD will allow for use to naturally drift into these other indications (ISS; TS) and once physicians become comfortable with the product, they will use it in adult GHD.

The second indication that VRS-317 will be developed in is adult GHD. Phase Ia data has already been generated in this patient population (as required prior to pediatric GHD) and a Phase II/III clinical trial may be initiated mid-2015. Other indications such as idiopathic short stature (ISS) and Turner Syndrome (TS) are natural extensions and should follow. Interestingly, our physician consultants believe that approval of VRS-317 in pediatric GHD will allow for use to naturally drift into these other indications (ISS; TS) and once physicians become comfortable with the product, they will use it in adult GHD.

Versartis also has an undisclosed product in pre-clinical development, which employs its XTEN technology – which has been applied to VRS-317 – that we expect to be unveiled in the second half of this year.

Figure 5 Versartis' Endocrinology Pipeline



Source: Company Reports

Lack Of hGH Treatment For GHD Can Have Serious Consequences

Growth hormone deficiency is a medical condition where people lack sufficient amounts of growth hormone and it can affect both children and adults. It is estimated that 3 children and 1 adult per every 10K people have GHD in the United States. The

prevalence in Europe is approximately equivalent to the US. The National Cooperative Growth Study (a database of patients receiving growth hormone therapy) reports that more than 20K children receive growth hormone treatment per year in the US. The overall number of hGH-treated patients in the US between pediatric/adult GHD and other (Turner Syndrome; ISS) is 55-57K. In Europe the number is slightly higher at around 73-79K and Japan has around 21-27K hGH-treated patients. The annual cost of hGH therapy in the US ranges from $12-27K depending on the indication and Europe has a tighter price range of $12-20K for the various indications. Pricing in Japan can run significantly higher for pediatric and other indications.

Figure 6 hGH Treatment And Pricing Estimates By Territory

United States	Prevalence	Treated Patients	Annual Cost
Pediatric	3:10K	19-20K	$23-25K
Adult	1:10K	14-15K	$12-15K
Other		20-22K	$25-27K
	Total	**55-57K**	

Europe	Prevalence	Treated Patients	Annual Cost
Pediatric	3:10K	33-35K	$15-18K
Adult	1:10K	25-27K	$12-15K
Other		15-17K	$20K
	Total	**73-79K**	

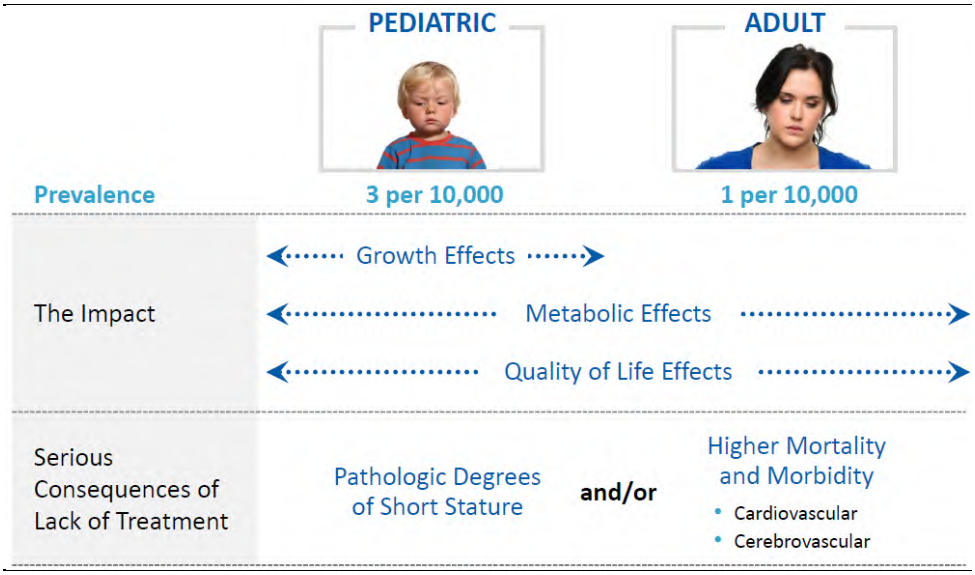
Japan	Prevalence	Treated Patients	Annual Cost
Pediatric	6-9:10K	15-17K	$30-35K
Adult	1:10K	3-5K	$10K
Other		3-5K	$40K
	Total	**21-27K**	

Source: Cowen and Company; Company Information

Slower-than-normal growth and/or shortness, accompanied by delayed maturation, a tendency towards obesity, delayed/deficient bone mineralization, impaired skeletal muscle growth, and a high-risk lipid profile is the most prominent manifestation of childhood or pediatric GHD.

Growth hormone is produced by the somatotroph cells of the anterior pituitary gland and its levels are regulated by two other hormones produced by the hypothalamus: growth hormone-releasing hormone (GHRH) and somatostatin. The former stimulates the production of growth hormone whereas the latter inhibits it. GHD in children can be related to congenital conditions, such as a defect in pituitary development or other genetic abnormalities. However, it can also be caused by unidentified reasons referred to as idiopathic GHD. Slower-than-normal growth and/or shortness, accompanied by delayed maturation, a tendency towards obesity, delayed/deficient bone mineralization, impaired skeletal muscle growth, and a high-risk lipid profile is the most prominent manifestation of childhood or pediatric GHD. GHD in adults is often associated with pituitary tumors and normally produces nonspecific symptoms, including decreased energy levels and strength, weight gain, emotional disturbance, and impaired sleep. Without treatment, patients with GHD may experience significant psychological effects and ultimately be associated with higher morbidity/mortality.

Figure 7 Impacts Of Pediatric And Adult GHD



Source: Company Reports; Utah Growth Study; British Society of Endocrinologists

The GHD Market Lacks Innovation – Daily rhGH Injections Have Been The Standard Of Care For Decades

GHD can be treated with daily subcutaneous or intramuscular injections of growth hormone, now available as a recombinant protein produced from bacteria. Treatment may vary depending on the age of the patient and the cause. In children suffering from GHD, the treatment can last multiple years as the patient is growing. For those with the most severe form of GHD, lifelong treatment may be recommended. Adult patients diagnosed with GHD typically receive growth hormone supplements at a reduced dose as compared to the dose administered to children, and the duration of the treatment is contingent on the indication.

As a large peptide molecule, growth hormone needs to be directly injected subcutaneously or intramuscularly to be able to enter the circulatory system as the acidity of the stomach would otherwise degrade the protein. The daily administration of growth hormone can be given with traditional syringes and needles, or with pen injectors. Compared to needle-based methods of injection, needle-free injectors have also been developed, which aim to eliminate both the physical and mental discomfort associated with the delivery and significantly improve the ease of use. This is especially important in children, which is the largest market opportunity for GHD and hence, why pediatric GHD is VRS-317's initial indication.

Daily injections of hGH can be a burden for patients – especially children, who tend to be more needle phobic and overall less compliant than adults. Parents basically have to check in on their children to make sure they took their shot every night (365 injections per year) for potentially more than 7 years (2,500+ injections). Rosenfeld et al. (2008) estimates that only 36% of patients are compliant and that 41% and 23% of patients are occasionally non-compliant and completely non-compliant, respectively. Many of these patients are also skeptical of treatment.

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consultants believe that compliance is the largest issue with existing daily hGH therapies and one consultant believes that some patients are up to 50-60% noncompliant or miss a dose at least every other day on average. In some diagnostic subgroups (lack of education, training, and patient monitoring), our consultants believe that up to half of the patients are seriously noncompliant.

Importantly, compliance has been shown to be correlated to increases in height velocity (HV). More than two skipped doses per week – which our consultants note is likely in a substantial portion of patients – can be statistically significant; reducing height velocity by approximately 50%, which would dramatically reduce the treatment benefit.

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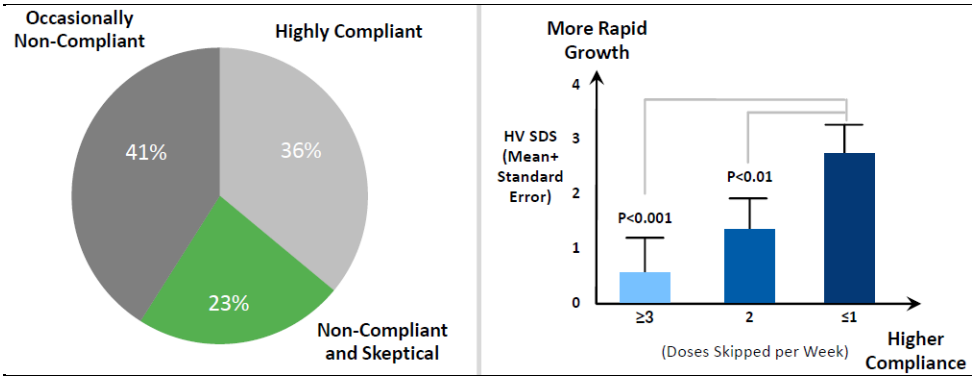
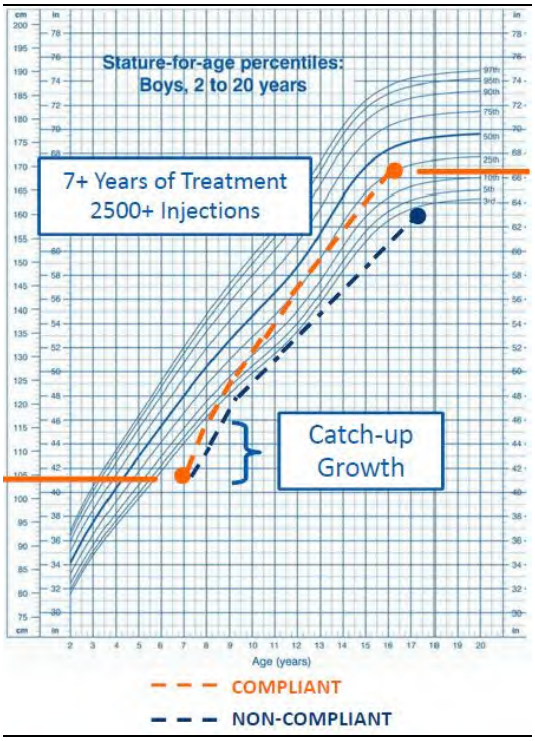
Figure 8 Daily Injections Often Result In Poor Compliance And Suboptimal Outcomes



Source: Company Reports; Rosenfeld et al (2008); Cutfield et al. (2011)

Non-compliance with daily hGH injections can also significantly reduce the ability for patients to achieve "catch-up growth." The "catch-up growth" phase is clearly a critical part of the GHD treatment paradigm, as it allows patients to reach the second or third decile of height for people of comparative age. Some analyses suggest that non-compliant patients fall well below this target and end up achieving a height well below average and below the bottom of the stature table for people of comparative age.

Figure 9 "Catch Up" Growth Is Critical And Impacted By Compliance



Source: Company Reports; CDC; Health Technology Assessment 2010/ KIGS Database; modified by Cowen and Company

Therefore, for some time now the primary goal of any company interested/involved in the hGH space has been to develop a long-acting growth hormone, which would improve compliance/convenience, and therefore make a more normal stature achievable for a larger percentage of patients, which is the primary objective of hGH therapy.

Therefore, for some time now the primary goal of any company interested/involved in the hGH space has been to develop a long-acting growth hormone, which would improve compliance/convenience, and therefore make a more normal stature achievable for a larger percentage of patients, which is the primary objective of hGH therapy.

VRS-317 Has The Potential To Be The First Long-Acting hGH Product In A World Of Daily Therapies

The hGH market has been established for quite some time now as daily therapies have been available since the 1980s. While early work on hGH therapy began in the 1940s, hGH treatment was only made available by way of extracting hGH from human cadaver pituitary glands from the 1950s on. However, in the 1960s a shortage of hGH extraction began and worsened in the 1970s as autopsies decreased. This marks the beginning of the need for recombinant hGH. Genentech (now Roche) was the early innovator in the space and received approval for Protropin in October 1985 for hypopituitary dwarfism and since then, Pharmacia (now Pfizer) introduced Genotropin, Novo Nordisk introduced Norditropin, and Serono introduced Saizen. Eventually, Genetech (now Roche) introduced a second hGH product, Nutropin, in March 1994 and discontinued Protropin in in 2004.

Important Takeaways From The Development/Commercialization Failure Of Previous Long-Acting Therapies

There were a few main issues with Nutropin Depot that physician consultants believed resulted in its demise: (1) it was originally marketed as a once-monthly therapy and based on clinical data, efficacy and drug exposure was more suggestive of once-weekly therapy, so it provided incomplete coverage and patients were achieving inferior HV results to daily therapies at 6 months; (2) it used a very large 21-gauge needle, which resulted in painful injections; and (3) it was a viscous solution and contained microspheres, which made it stay in the injection site for a long period of time and caused lipoatrophy, or a localized loss of fat tissue over time.

As stated previously, several companies have tried to develop and commercialize long-acting growth hormone products in the past only to have them fail in clinical development or upon commercialization. In December of 1999, Genentech (in collaboration with Alkermes) received approval of Nutropin Depot (somatropin injectable suspension) for pediatric growth hormone insufficiency. This was the first long-acting hGH therapy to reach the market and there was a lot of enthusiasm for it as our consultants note that it was capturing an estimated 70% of new patient starts in the beginning. However, commercialization of Nutropin Depot eventually failed and it was pulled from the market. There were a few main issues with Nutropin Depot that physician consultants believed resulted in its demise: (1) it was originally marketed as a once-monthly therapy and based on clinical data, efficacy and drug exposure was more suggestive of once-weekly therapy, so it provided incomplete coverage and patients were achieving inferior HV results to daily therapies at 6 months; (2) it used a very large 21-gauge needle, which resulted in painful injections; and (3) it was a viscous solution and contained microspheres, which made it stay in the injection site for a long period of time and caused lipoatrophy, or a localized loss of fat tissue over time. This can cause an unsightly-looking dimple at the injection site. Nodules, which are raised bumps in or under the skin greater than 0.5 cm in diameter, were also observed with treatment.

These issues have been reflected in many of the other depot and PEGylated hGH development programs. In fact, many of these programs are no longer active in development. In addition to the issues described above with Nutropin Depot, which have been reflect in other development programs, these products are typically complex to manufacture resulting in lower yields and a higher cost of goods and therefore, a lower profit margin. Additionally, PEGylated hGH products have been known to cause even more severe lipoatrophy; they typically only support a dosing regimen less than one week, have slow absorption due to drug product viscosity, and also results in higher COGS due to post-production modifications.

Clearly, developing long-acting hGH products with existing depot and PEGylation technologies has been incredibly challenging and has not generated any viable products to-date. In this context, our consultants believe that VRS-317's XTEN technology is much more interesting and has a higher chance of clinical success.

Specifically, our physician consultants are unsure if the Ambrx product is still in development after the company's previous partner, Serono, walked away from the program due to AEs observed that were associated with PEGylation of the molecule. Our consultants believe that Serono must have walked away for reasons similar to why Novo Nordisk discontinued a previous long-acting hGH PEGylated candidate. LG has a sustained-release, once-weekly depot product approved in Korea, but it involves a large needle (painful injections), requires mixing it into a cloudy solution, and it delivers a low concentration of hGH, which requires two shots and suboptimal efficacy. Apparently, LG applied to the FDA two years ago, but its application has been put on hold ever since. Our physician consultants believe the Altus was in Phase I before the company went bankrupt and are unsure if it has been moved forward in the clinic or if another company has picked up the rights. Clearly, developing long-acting hGH products with existing depot and PEGylation technologies has been incredibly challenging and has not generated any viable products to-date. In this context, our consultants believe that VRS-317's XTEN technology is much more interesting and has a higher chance of clinical success.

Figure 10 Long-Acting Growth Hormone Products With Significant Tradeoffs No Longer In Development

Type	Depots	PEG-hGH
Companies	Genentech, LG, Altus	Novo Nordisk, Pfizer, Ambrx
Examples of Safety Issues	Injection Site Reactions – Nodules, Lipoatrophy	Severe Lipoatrophy
Dosing Regimen (PK Profile)	Incomplete Coverage for Regimen	Less than One Week, Slow Absorption
Manufacturing	Complex, Lower Yield, Higher COGS	Post-Production Modifications, Higher COGS

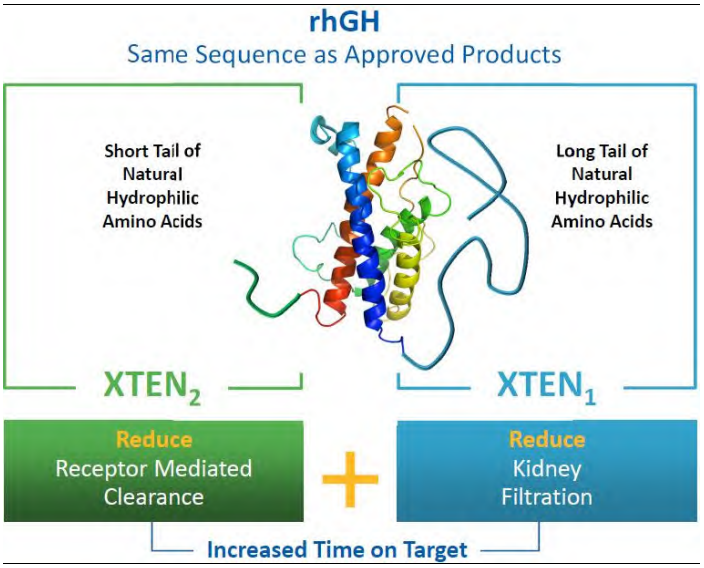
Source: Company Reports

XTEN Technology To Extend hGH Treatment Duration

Worth noting, the hydrophilic characteristics of both XTEN modifications and decreased hGH receptor-mediated binding leads to increased water solubility for VRS-317, which should allow it to rapidly clear from the injection site and avoid serious adverse events like injection site reactions and lipoatrophy that have plagued earlier long-acting hGH development candidates. Both the XTEN1 and XTEN2 VRS-317 modifications in combination contribute to the molecule's increased half-life and what appears to be a once-monthly profile.

Clearly, the goal is to develop a long-acting hGH product that avoids the issues described above and we – and our consultants – believe that Versartis may have done so with VRS-317. Versartis' VRS-317 employs the XTEN technology, which is a half-life extension technology licensed from Amunix. Importantly, this technology has also been validated and licensed by serious players like Biogen Idec and Janssen. Importantly, the core rhGH sequence of VRS-317 is the same as the daily products on the market, so we believe there should be extremely low clinical risk with respect to the ability for the product to reach hGH receptors and provide a meaningful clinical benefit. What is unique about VRS-317 is the strategy that Versartis employed (via the XTEN technology) to extend its half-life to what looks to be a month. The $XTEN_1$ modification adds a long tail of natural hydrophilic ("water liking" or water soluble) amino acids that greatly increases the molecule's size (5x greater than rhGH) and reduces VRS-317's ability to be filtrated by the kidney, or eventually excreted and removed from the body. This extends the amount of time that VRS-317 is circulated in the body and ultimately, its half-life. This modification alone could allow for a once-weekly dosing regimen. The second modification, $XTEN_2$, which provides the addition of a short tail of natural hydrophilic amino acids, reduces hGH receptor-mediated clearance thereby further extending its circulation in the body or half-life. This modification in particular is part of the genius of VRS-317 in that typically when scientists screen for compounds, they screen for molecules with the highest affinity for the target receptor and therefore, this modification is counterintuitive. Worth noting, the hydrophilic characteristics of both XTEN modifications and decreased hGH receptor-mediated binding leads to increased water solubility for VRS-317, which should allow it to rapidly clear from the injection site and avoid serious adverse events like injection site reactions and lipoatrophy that have plagued earlier long-acting hGH development candidates. Both the $XTEN_1$ and $XTEN_2$ VRS-317 modifications in combination contribute to the molecule's increased half-life and what appears to be a once-monthly profile.

Figure 11 VRS-317 XTEN Modifications



Source: Company Reports; Cleland et al., J. Pharma Sci (2012)

VRS-317's Early Clinical Data Is Supportive Of Once-Monthly Dosing

Versartis' VRS-317 clinical program consists of early Phase I and Phase IIa data (3 month HV endpoint). Final 6 month Phase IIa HV data should read out from the ongoing Phase IIa study and be presented on June 23 soon this year in Chicago at the ICE/ENDO Conference. VRS-317 has a relatively simple and straightforward clinical development and regulatory process. For approval, a single dose-finding trial (ongoing Phase I/IIa) is required along with a Phase III trial. A Phase III study could be initiated in early 2015 with potential interim 6-month mean height velocity (HV) results in 2016 and top-line 12-month mean HV results in the first half of 2017.

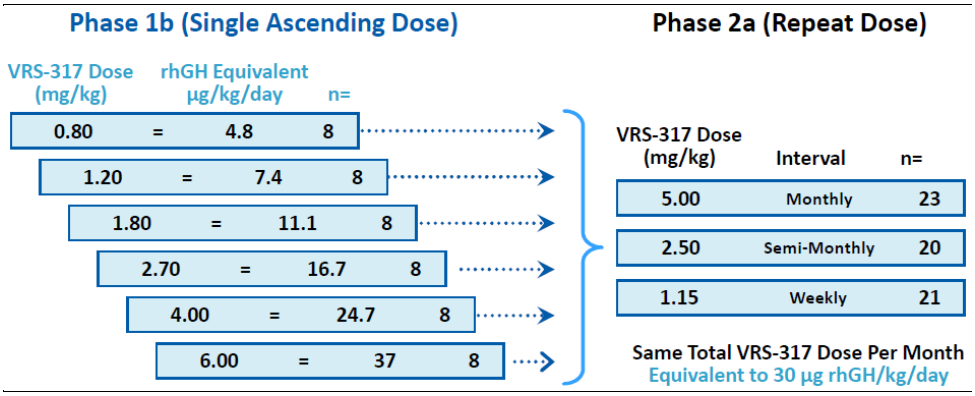
Phase Ib Study Portion Designed To Select Proper Dosing Regimen

The first Phase 1b portion of the ongoing Phase Ib/IIa study had a single ascending-dose design to better elucidate the pharmacokinetics and pharmacodynamics (PK/PD) of VRS-317 and to select a proper dosing regimen. The study enrolled pre-pubertal GHD children (ages 3-11) in the US that were naïve to hGH treatment. In addition to looking at PK/PD, safety and tolerability was observed. In total, 48 patients (8 per dose cohort) will receive a single dose of VRS-317 ranging from 0.8 to 6.0 mg/kg (equivalent to 4.8-37 µg/kg/day of current daily rhGH therapy). Blood samples were taken at 6 points over 30 days and safety monitoring occurred 60 days post-dose.

Phase IIa Study Portion Designed To Select Proper Dosing Interval

The ongoing Phase IIa repeat dose portion of the study (n=64) is a 6 month study looking at height velocity (HV) after 6 months as well as PK, IGF-1 response, and safety data. The 64 patients in the Phase IIa portion of the study were distributed roughly evenly across three cohorts with weekly, semi-monthly, and monthly dosing intervals – all dosing regimens equate to the same total VRS-317 dose per month (equivalent to 30 µg/kg/day of current daily rhGH therapy). After 6 months of treatment, all patients are allowed to continue treatment in a clinical trial extension study.

Figure 12 VRS-317 Phase 1b/2a Study Design



Source: Company Reports

For the Phase IIa study portion, there were no clinically or statistically significant between group differences. Worth noting, the bone age of 6+ years in this patient population is considered normal for pediatric GHD patients, which is delayed roughly 1.5 years. IGF-1 standard deviation scores (SDSs) between -1.5 and -2.0 are also normal in this patient population and this allows for the early "catch-up" growth upon hGH treatment initiation. Impaired GH stimulation tests results are also considered normal for this patient population.

Figure 13 Phase 2a Trial Subject Demographics At Baseline

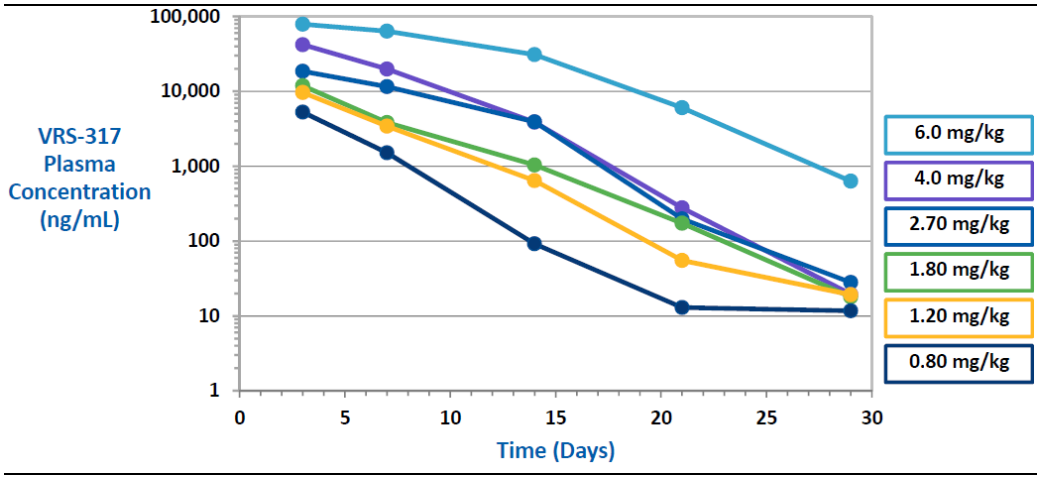
	All Subjects	1.15 mg/kg Weekly	2.5 mg/kg Semimontly	5.0 mg/kg Monthly
# Subjects	64	21	20	23
Age (Screening)	7.83 (2.4)	7.51 (2.3)	7.96 (2.4)	8.01 (2.5)
Males/Females	37/27	10/11	13/7	14/9
Height SDS	-2.51 (0.5)	-2.70 (0.7)	-2.53 (0.4)	-2.33 (0.5)
Weight (kg)	20.8 (6.4)	19.1 (5.3)	21.8 (7.4)	21.4 (6.4)
Bone Age	6.4 (2.4)	6.1 (2.5)	6.6 (2.2)	6.4 (2.6)
GH Stimulation Test	5.4 (2.6)	5.7 (2.0)	4.9 (2.8)	5.5 (2.8)
IGF-I SDS	- 1.72 (0.8)	-1.55 (0.9)	-2.00 (0.8)	-1.62 (0.7)
Phase 1b	44/64	14/21	14/20	16/23
Phase 1b Mean Dose	2.9 (1.8)	2.7 (1.8)	2.9 (1.9)	3.0 (1.8)

Source: Company Reports

Phase Ib PK And IGF-1 Results Provide Rationale For Phase IIa Study Portion Dose Selection

PK results (on the following page) from the Phase Ib portion of the study for the various doses tested demonstrated that adequate VRS-317 levels remained in circulation through 30 days.

Figure 14 Phase 1b VRS-317 Pharmacokinetic Results



Source: Company Reports; modified by Cowen and Company

IGF-1 is a hormone primarily produced by the liver that is a mediator of hGH and stimulates systemic body growth. IGF-1 production is stimulated by hGH, which is produced in the anterior pituitary gland. Therefore, GHD patients (hGH deficient by nature) and patients with short stature commonly have lower than average IGF-1 levels. This is why Versartis measured VRS-317's effect on IGF-1 levels in the Phase Ib portion. IGF-1 standard deviation scores (SDS) are a measure of a range of IGF-1levels in normal children, so a SDS of 0 is considered normal. After administration of a single VRS-317 dose above 2 mg/kg, maximum IGF-1 SDS reached above 0 and into the 0-2 target range. Importantly, no significant IGF-1 overexposure (sustained levels above 2 IGF-1 SDS) was observed. There were only 2 transient time point values of IGF-1 SDS above 2.0 and even these values were barely above – on the order of 2.05 or 2.08 for example. Importantly, the company is being particularly strict by setting an IGF-1 SDS cutoff of 2. Typically, only an IGF-1 SDS greater than 3 is of concern based upon current hGH treatment guidelines, so VRS-317 still had a large buffer here and we wouldn't expect this to be an issue with the FDA.

A single dose of VRS-317 between 4-6 mg/kg was also enough to achieve the target range of a 1.2-1.6 increase in average monthly IGF-1 SDS levels. Versartis believes that increases of average monthly IGF-1 SDS levels within the target range, which were achieved, are sufficient to support monthly dosing. Additionally, our physician consultants believe that the IGF-1 data to-date "looks very good."

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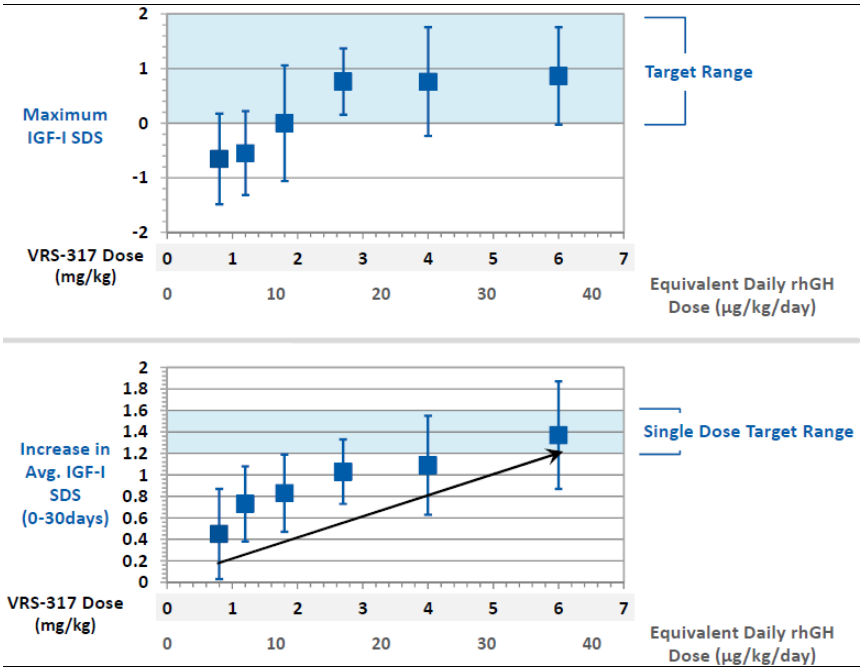
Figure 15 Phase 1b IGF-1 Standard Deviation Score Response To A Single Dose Of VRS-317



Source: Company Reports

Based upon the PK and IGF-1 results described above, Versartis selected the 5 mg/kg VRS-317 dose to go forward into the Phase IIa portion of the ongoing study. The 5 mg/kg VRS-317 dose is equivalent to 30 µg/kg/day of current daily rhGH therapy. This is somewhere in between the labeled dosing ranges for most of the daily hGH products and lower than the average European (33 µg/kg/day) and US (43 µg/kg/day) administered doses. The company believes this dose should allow for minimal safety and tolerability risk and avoid overexposure of elevated IGF-1 levels. With that said, the company is still retaining the option to modify the dose in the extension or future Phase III study should additional results made available this June that suggest it be modified.

Figure 16 Current Labeled Pediatric GHD Doses And Phase IIa Dose Selection

	Daily rhGH (µg/kg/Day)
Norditropin (Novo)	24 – 34
Genotropin (Pfizer) & Omnitrope (Sandoz)	24 – 34
Nutropin (Genentech/Roche)	43
Humatrope (Lilly)	26, 43
VRS-317 Phase 2a Dose	30
Average European Dose	**33**
Average US Dose	**43**

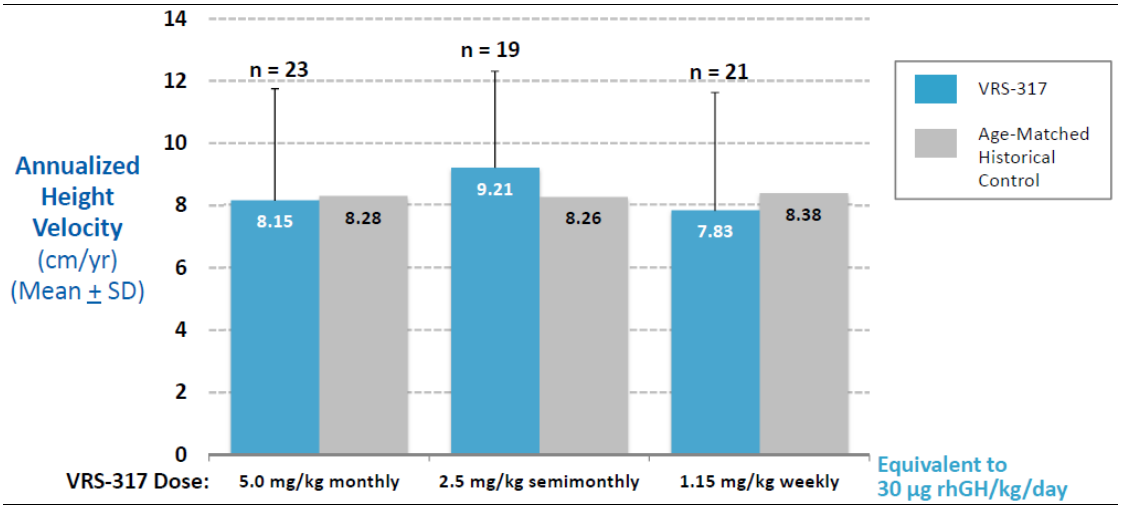
Source: Company Reports

Preliminary Phase IIa Results Demonstrate Once-Monthly Proof Of Concept And Should Be Predictive Of Positive 6-Month Results In June

We – and our consultants – believe this initial data is very promising and not only demonstrates proof of concept for VRS-317 as a once-monthly product, but should be somewhat predictive of the 6 month HV results to read out in June.

Preliminary 3-month height velocity (HV) results have been reported for the ongoing Phase IIa portion of the study by Versartis. When compared to age-matched historical controls that were generated from the KIGS Database (~3,000 patients) of 12-month HV measurements from daily 33 µg/kg/day hGH therapy (European dose), the annualized HV measurements (from 3 months) of all three VRS-317 dose regimen cohorts were numerically equivalent.

Figure 17 Preliminary Phase IIa 3-Month Annualized VRS-317 Height Velocity Data



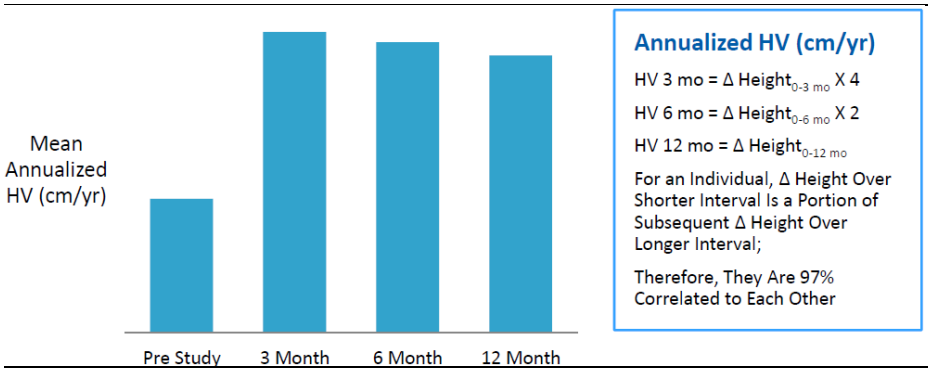
Source: Company Reports

We – and our consultants – believe this initial data is very promising and not only demonstrates proof of concept for VRS-317 as a once-monthly product, but should be

somewhat predictive of the 6-month HV results to read out in June. Romer et al. (2009) conducted an analysis for mean HV measurements at 3, 6, and 12 months, showing that they are 97% correlated. Therefore, the annualized 3-month results, which are positive per our discussion above, should be positively correlated to and predictive of the annualized 6-month results. If this is the case in June, the 6-month results would largely be considered successful and support further study of VRS-317 in Phase III.

Worth noting, the reason why annualized 3-month mean HV result are greater than annualized 6-month results (and ann. 6-month results > 12 month results) is because children tend to grow at different rates in the beginning of treatment and then a "regression to the mean" phenomenon occurs over time.

Figure 18 Historical 3, 6, And 12 Month Height Velocity Correlations



Source: Company Reports; Romer et al (2009)

VRS-317's Initial Safety Profile Matches That Of Current, Popular Daily hGH Therapies

Adverse events (AE) through February 28, 2014 have been reported thus far and VRS-317 treatment has been well-tolerated with no serious adverse events or unexpected adverse events occurring. No negative metabolic effects or anti-drug antibodies have been observed either. Importantly, no lipoatrophy or nodules, which have plagued other long-acting hGH products in the past (including Nutropin Depot), were observed.

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Figure 19 Phase IIa Adverse Events

ADVERSE EVENT[1]	1.15 mg/kg Weekly	2.5 mg/kg Semimonthly	5.0 mg/kg Monthly
# Subjects	21	20	23
# Subjects with any AE	10	9	10
Injection Site Discomfort[2]	7	8	8
Injection Site Erythema	3	1	2
Injection Site Blanching	0	0	1
Injection Site Bruising	0	0	1
Musculoskeletal Pain	2	1	2
Headache	0	1	1
Dizziness	0	0	1
Maculopapular & Urticarial Rash	0	1	0

Source: Company Reports; modified by Cowen and Company

An extension trial (n=250) for all GHD children that complete the Phase IIa portion of the ongoing study as well as the future Phase III trial is ongoing. These patients will receive VRS-317 treatment until drug approval, so there will be no interruption in their treatment plan, which is critical, especially in the early stages of "catch-up" growth. This should provide Versartis with up to 7 years of patient safety data by the time of approval. Also, switching data from the daily comparator to VRS-317 will be acquired, which should be important when considering that daily hGH-treated patients would switch over once VRS-317 is made available to the marketplace upon approval.

Phase III Program To Be Similar To The Omnitrope/Valtropin Registration Studies

If the final 6-month Phase IIa results are successful in June – which we think is a strong likelihood given the discussion above – they will form the basis of the dosing regimen to be used in the Phase III registration study that can begin as soon as early 2015. We would note that even if for some reason the once-monthly dosing regimen does not provide adequate efficacy and a twice-monthly regimen is taken into Phase III, our consultants believe this will not have a meaningful impact, as a twice-monthly regimen would still be a significant advantage to existing daily therapies. We – and our consultants – still believe it will demonstrate a once-monthly profile based upon existing data as discussed previously, but it is comforting to understand that Versartis has significant wiggle room when it comes to the VRS-317 dosing regimen.

Importantly, the primary endpoint of mean change in HV will be analyzed for noninferiority, which we believe substantially reduces the clinical risk in Phase III if the 6-month Phase IIa results are successful this June. Especially, when considering the high correlation between 6 and 12 month mean HV results as discussed previously and the large margin of noninferiority that the FDA allows (2 cm/year).

The proposed future Phase III clinical trial design for pediatric GHD will be designed similarly to registration studies conducted for the most recently approved hGH products (Sandoz's and Biopartners' Omnitrope and Valtropin registration studies, respectively). Similar to the Phase Ib/IIa study, it will enroll pre-pubertal GHD children naïve to treatment and have similar inclusion/exclusion criteria. The company has planned for this trial to include sites in the US, Europe, and Canada. 160 GHD children will be enrolled, randomized (age balanced), and treated with two different VRS-317 dosing regimens (likely once-monthly and twice-monthly) for 12 months when compared to an active daily hGH drug control. We suspect the primary endpoint will be similar to the Phase IIa study (mean change in HV), but using a 12 month endpoint.

Importantly, the primary endpoint of mean change in HV will be analyzed for noninferiority, which we believe substantially reduces the clinical risk in Phase III if the 6-month Phase IIa results are successful this June. Especially, when considering the high correlation between 6 and 12 month mean HV results as discussed previously and the large margin of noninferiority that the FDA allows (2 cm/year). Subjects who complete the trial will roll over to the ongoing extension trial.

Versartis Is Leading The Pack In Long-Acting hGH Development –The ICE/ENDO Conference In June Should Be An Exciting One

Our consultants have stated that Versartis has been the most transparent to date with VRS-317's clinical progress and importantly has experienced no significant safety issues (injection site reactions; lipoatrophy; negative metabolic effects; anti-drug antibodies) as of yet. Also worth noting, VRS-317 is the only potential once-monthly formulation in development, giving it a potential significant marketing advantage. Our physician consultants believe that there is "no question" that VRS-317 has a longer half-life than other long-acting hGH therapies in development.

The three companies that appear to be leading the pack in long-acting hGH development are Versartis, Novo Nordisk, and Prolor/OPKO Health, according to our physician consultants. Our consultants have stated that Versartis has been the most transparent to date with VRS-317's clinical progress and importantly has experienced no significant safety issues (injection site reactions; lipoatrophy; negative metabolic effects; anti-drug antibodies) as of yet. Also worth noting, VRS-317 is the only potential once-monthly formulation in development giving it a potential significant marketing advantage. Our physician consultants believe that there is "no question" that VRS-317 has a longer half-life than other long-acting hGH therapies in development. Lastly, relative to all other long-acting hGH products in development, VRS-317 has significantly lower COGS – even lower than current daily hGH products. This is due to the fact that VRS-317 is a single chain of amino acids that can be readily produced in *E. coli* with a straightforward manufacturing process (in conjunction with Boehringer Ingelheim). This will result in a very favorable profit margin to Versartis upon approval and subsequent launch. For these reasons, our physician consultants are favorable towards the XTEN technology applied to VRS-317 relative to other long-acting product technologies (i.e., depot, PEGylation).

If Novo Nordisk discontinues this program – which could be likely given the history of other large pharma development programs in the space – we see Versartis as an ideal acquisition candidate. Novo Nordisk (and potentially other large players like Pfizer, Genetech/Roche, Lilly, Teva, etc.) could acquire Versartis quite simply to extend and preserve their dominant global hGH franchise (28% market share; $1B+ in sales).

Novo Nordisk has been less visible about their program and appears to be slightly behind in Phase II development, as only data in adults has been generated. Additionally, QTc prolongation has been observed in healthy subjects, which is a serious issue in the eyes of the FDA and we believe it could potentially kill the program. QTc prolongation has resulted in the termination of programs/drugs in other therapeutic areas. We believe the FDA will simply not accept the potential for increased cardiac events in a therapeutic area where many patients are already adequately treated on daily hGH therapies – the risk is too great relative to the incremental benefit. If Novo Nordisk discontinues this program – which could be likely given the history of other large pharma development programs in the space – we see Versartis as an ideal acquisition candidate. Novo Nordisk (and potentially other large players like Pfizer, Genetech/Roche, Lilly, Teva, etc.) could acquire Versartis quite simply to extend and preserve their dominant global hGH franchise (28% market share; $1B+ in sales).

Our consultants also think the Prolor/OPKO program (MOD-4023; Phase III in adult GHD; Phase II in pediatric GHD) is interesting, but we won't understand its clinical profile until the Phase II pediatric study reads out this year. Per clinicaltrials.gov, the study should have completed in December 2013, so we could see data soon, potentially before the June ICE/ENDO Conference. Ascendis is a private Danish company that has been even less visible about their ACP-001 long-acting hGH program. In September 2013, the company initiated a Phase II study in pediatric GHD and per clinicaltrials.gov, the study is due to complete in May of this year, so we may potentially see data at ICE/ENDO in June, similar to the VRS-317 Phase II pediatric GHD data. Teva also appears to be developing a long-acting albutropin product, but

our physician consultants believe it is substantially behind the Versartis, Novo Nordisk, and Prolor/OPKO Health programs.

Figure 20 Long-Acting Growth Hormone Products In Development

Type	VRS-317	Chemically Modified rhGH	CTP-hGH	Circulating PEG Depot
Companies	VERSARTIS	Novo Nordisk	Prolor/OPKO	Ascendis
Safety	No Safety Issues to Date	QT_C Prolongation in Healthy Subjects	No Published Data	No Published Data
Dosing Regimen (Implied from PK)	Up to Monthly Potential	Weekly Profile in Adults	Less than One Week	Less than One Week
Manufacturing	Lower COGS than Current Daily rhGH	Post-Production Modifications	Mammalian Cell, 6+ Steps	Post-production Modifications

Source: Company Reports

The Growth Hormone Market Is Well-Established, Undifferentiated, Highly Fragmented, And Primed For Innovation

Of the remaining $1.35B in sales (ISS, TS, and other), our consultants suggest that a very substantial portion of that is due to off-label administration for adults who want to achieve anti-aging or body building effects. We estimate that this could account for up to a third of the total market, or approximately $900MM.

Versartis estimates the worldwide daily growth hormone market was approximately $3B in 2012 and has exhibited a 6% average annual growth rate over the past 5 years. By 2018, the worldwide daily hGH market is expected to grow a cumulative 30-40% to $4B. $1.5B, or 50% of that makes up pediatric GHD, VRS-317's initial indication. The remaining 50% or $1.5B consists of adult GHD, idiopathic short stature (ISS), Turner Syndrome (TS), and others. While Versartis estimates adult GHD, ISS, and TS, make up 30% of the overall market or $900MM, our consultants estimate that true adult GHD (on-label) is only 10% of the pediatric market, or $150MM. Of the remaining $1.35B in sales (ISS, TS, and other), our consultants suggest that a very substantial portion of that is due to off-label administration for adults who want to achieve anti-aging or body building effects. We estimate that this could account for up to a third of the total market, or approximately $900MM. This would suggest that the ISS and TS opportunity is around $450MM in sales.

The $3B global market consists of the three major territories: the US, EU, and Japan. Versartis estimates the US and EU markets make up approximately 35-40% of the global market each, or $1.1-1.2B. In the US, the pediatric market is roughly $450MM or just under 40%, while it is an estimated $550MM or 50% in the EU. The Japanese market is about half the size of the US and EU at $600MM, but interestingly, pediatric GHD accounts for almost the entire market, or 80%+. Thus, while it is only 20% of the global GHD market, it is 30% of the pediatric GHD market, which is increasingly relevant to VRS-317's initial indication.

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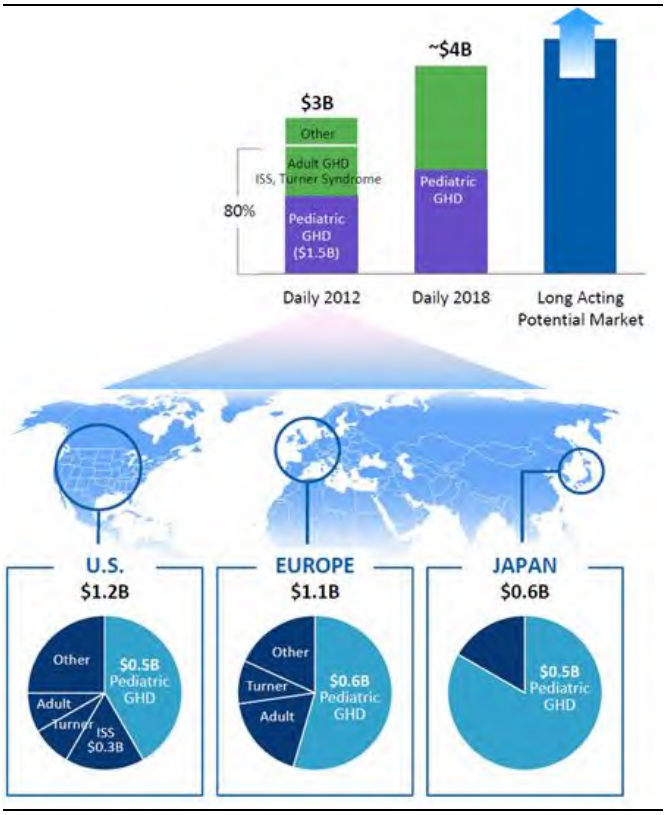
portion of the global pediatric GHD opportunity. Importantly, the company believes that the planned Phase III trial in the US and EU could serve as part of the Japanese filing in conjunction with a bridging study.

Figure 21 The Global Daily Growth Hormone Market

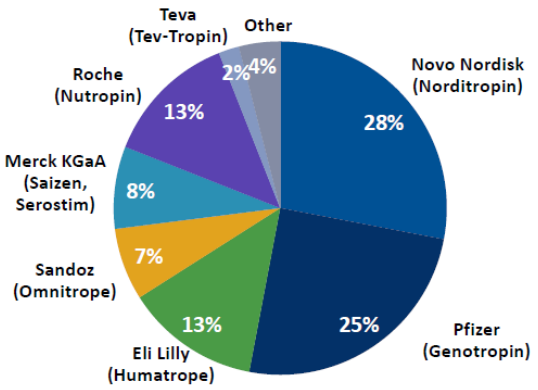


Source: Company Reports; Novo Nordisk Investor Presentation (2013); modified by Cowen and Company

Since the clinical efficacy of these daily hGH therapies is largely equivalent, competition within the marketplace is fierce and based upon tertiary issues like company history/reputation, service, and device innovation.

Due to the available of daily rhGH therapies for almost three decades coupled with the inability for drug companies to successfully develop and commercialize new, long-acting rhGH therapies, the worldwide hGH market is well-established, undifferentiated, and highly fragmented. A couple of the early hGH adopters, Novo Nordisk and Pfizer, split >50% of the worldwide market, while the remaining <50% is split by Teva, Genentech/Roche, Merck, Sandoz, and Lilly. Since the clinical efficacy of these daily hGH therapies is largely equivalent, competition within the marketplace is fierce and based upon tertiary issues like company history/reputation, service, and device innovation.

Figure 22 Daily hGH Worldwide Market Share



Source: Company Reports; Novo Nordisk Investor Presentation (2013)

We – and our consultants – believe that the entrance of a long-acting growth hormone product would be very competitive and not only cannibalize a sizable portion of the existing market, but it would also expand the market through increased product attractiveness to patients and improved compliance.

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As one might guess, the hGH market in the US is even more fragmented with players like Pfizer, Lilly, and Novo Nordisk having similar a similar 15-20% market share. While Genetech/Roche may be a smaller player on a global scale (13% share per above), the company has a dominant 27% in the US per IMS.

Figure 23 Daily hGH US Annual Product Sales

Product Sum	Company	2011 Annualized Sales ($MM)	2012 Sales ($MM)	2013 Sales ($MM)	Market Share
GENOTROPIN	Pfizer	$ 310	$ 295	$ 290	19%
HUMATROPE	Lilly	$ 225	$ 210	$ 235	16%
NORDITROPIN FLEXPRO	Novo Nordisk	$ 155	$ 175	$ 220	16%
NORDITROPIN NORDIFLEX		$ 50	$ 20	$ 25	
NUTROPIN	Genentech/Roche	$ 30	$ 15	$ 5	27%
NUTROPIN AQ		$ 370	$ 380	$ 400	
OMNITROPE	Novartis	$ 50	$ 90	$ 105	7%
SAIZEN	Merck	$ 130	$ 130	$ 145	10%
TEV-TROPIN	Teva	$ 45	$ 65	$ 75	5%
Grand Total		**$ 1,365**	**$ 1,380**	**$ 1,500**	**100%**
% Change			*1%*	*9%*	

Source: Cowen and Company; IMS

We – and our consultants – believe that there has been and should be high interest in a long-acting hGH therapy to address causes of noncompliance and reducing the injection burden for patients. The company believes that VRS-317 may be able to achieve access via preferred/co-preferred formulary status, while being priced at parity to existing daily hGH treatments.

Versartis Is Capable Of VRS-317 US Commercialization, Which Should Require A Targeted, Specialty Sales Force

Versartis believes that 50 sales representatives should be sufficient to reach an estimated 800 pediatric endocrinologists. Of course, the initial sales efforts will be focused in targeting a concentrated subset of high prescribers. We – and our consultants – believe that there has been and should be high interest in a long-acting

hGH therapy to address causes of noncompliance and reducing the injection burden for patients. The company believes that VRS-317 may be able to achieve access via preferred/co-preferred formulary status, while being priced at parity to existing daily hGH treatments. The company fully expects to commercialize VRS-317 in the US, and we expect a European commercial strategy to be identified in the next 12-24 months. Importantly, the CEO, Dr. Jeff Cleland, was the team leader through the launch of the only FDA-approved long-acting hGH product, Nutropin Depot. Thus, we believe that this management team is as capable as any when it comes to launching a long-acting hGH product in today's environment.

VRS-317's Patent Estate Is Robust With Coverage Through At Least 2026 And Potentially 2030

Worth noting, VRS-317 is considered a new chemical entity (NCE) and not a formulation change like hGH depot products, which should provide added strength to the VRS-317 patent estate. Versartis believes that VRS-317's patent coverage will last through 2026 at least, with the potential for coverage beyond 2030, which will give it at least 8-12 years of protection

VRS-317's intellectual property consists of multiple layers of protection, which includes composition of matter, method of treatment, and method of use patent claims. Thus far, 6 patents (3 US; 3 ex-US) have been issued with an additional 66 patent applications pending (15 US; 6 provisional). Worth noting, VRS-317 is considered a new chemical entity (NCE) and not a formulation change like hGH depot products, which should provide added strength to the VRS-317 patent estate. Versartis believes that VRS-317's patent coverage will last through 2026 at least, with the potential for coverage beyond 2030, which will give it at least 8-12 years of protection before its cash flows potentially become subject to biosimilar risk.

Figure 24 Versartis Annual P&L

VERSARTIS - 2013-2032 ESTIMATED ANNUAL EPS BUILDUP ($MM)

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	CGR	Comments
U.S. VRS-317 pediatric GHD Sales						$40.0	$100.0	$150.0	$200.0	$250.0	$290.0	$320.0	$335.0	$350.0	$370.0	$385.0	$400.0	$415.0	$270.0	$175.0	NM	- VRS-317 in Phase II; Launch expected in 2018
Growth Rate							+150%	+50%	+33%	+25%	+16%	+10%	+5%	+5%	+5%	+4%	+4%	+4%	-35%	-35%		- Rapid growth expected; biologic-type exclusivity
EU VRS-317 pediatric GHD Sales						$40.0	$110.0	$150.0	$200.0	$250.0	$280.0	$300.0	$330.0	$345.0	$360.0	$380.0	$395.0	$410.0	$265.0	$170.0	NM	- VRS-317 in Phase II; Launch expected in 2018
Growth Rate							+175%	+36%	+65%	+50%	+40%	+30%	+10%	+5%	+5%	+5%	+4%	+4%	-35%	-35%		- Solid growth expected
Japan VRS-317 pediatric GHD Sales								$30.0	$110.0	$140.0	$160.0	$180.0	$195.0	$205.0	$215.0	$225.0	$230.0	$235.0	$240.0	$155.0	NM	- VRS-317 Japan plans not clarified yet; Launch expected in 2020
Growth Rate									+65%	+50%	+40%	+30%	+7%	+5%	+5%	+5%	+3%	+3%	+3%	-35%		- Solid growth expected
Total VRS-317 pediatric GHD Sales						$80.0	$210.0	$330.0	$510.0	$640.0	$730.0	$800.0	$860.0	$900.0	$945.0	$990.0	$1,025.0	$1,060.0	$775.0	$500.0	NM	-VRS-317 could garner $1B+ in revenue given attractive profile
Growth Rate								+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%		- Rapid growth expected; biologic-type exclusivity
Other Indications						$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0		- Potential in short-stature, adult GHD, Turner Syndrome etc.
Total Versartis Revenues	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$80.0**	**$210.0**	**$330.0**	**$510.0**	**$640.0**	**$730.0**	**$800.0**	**$860.0**	**$900.0**	**$945.0**	**$990.0**	**$1,025.0**	**$1,060.0**	**$775.0**	**$500.0**		
% Change							+163%	+57%	+55%	+25%	+14%	+10%	+8%	+5%	+5%	+5%	+4%	+3%	-27%	-35%		
Cost of Goods	$0.0	$0.0	$0.0	$0.0	$0.0	$8.0	$21.0	$33.0	$51.0	$64.0	$73.0	$80.0	$86.0	$90.0	$94.5	$99.0	$102.5	$106.0	$77.5	$50.0		
Gross Profit	$0.0	$0.0	$0.0	$0.0	$0.0	$72.0	$189.0	$297.0	$459.0	$576.0	$657.0	$720.0	$774.0	$810.0	$850.5	$891.0	$922.5	$954.0	$697.5	$450.0		
Gross Margin						90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%		- Solid margins
SG&A	$4.4	$12.0	$15.0	$25.0	$50.0	$75.0	$115.0	$130.0	$150.0	$170.0	$190.0	$210.0	$230.0	$250.0	$270.0	$290.0	$310.0	$330.0	$250.0	$100.0	+29%	- Salesforce expansion in 2017-18, in preparation for VRS-317 launch
% of Revs							54.8%	39.4%	29.4%	26.6%	26.0%	26.3%	26.7%	27.8%	28.6%	29.3%	30.2%	31.1%	32.3%	20.0%		- 150 reps@$300K adds $45-50MM
R&D	$14.9	$38.0	$40.0	$45.0	$50.0	$75.0	$74.0	$50.0	$50.0	$45.0	$45.0	$40.0	$40.0	$35.0	$35.0	$35.0	$35.0	$35.0	$35.0	$20.0	+5%	- Clinical trial costs in 2014 of approximately $35MM
% of Revs						93.8%	35.2%	15.2%	9.8%	7.0%	6.2%	5.0%	4.7%	3.9%	3.7%	3.5%	3.4%	3.3%	4.5%	4.0%		- Additional clinical trials for VRS-317 indications
Amortization	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	NM	
Operating Expenses	$19.3	$50.0	$55.0	$70.0	$100.0	$150.0	$189.0	$180.0	$200.0	$215.0	$235.0	$250.0	$270.0	$285.0	$305.0	$325.0	$345.0	$365.0	$285.0	$120.0	+19%	
% of Revenues					NM	NM	NM	54.5%	39.2%	33.6%	32.2%	31.3%	31.4%	31.7%	32.3%	32.8%	33.7%	34.4%	36.8%	24.0%		
Operating Income	($19.3)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	NM	- Operating profit expected in 2020
% Operating Margin	NM	NM	NM	NM	NM	NM	NM	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%		
Non-Operating Income																						
Interest Income	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0		
Interest Expense	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other Income	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Non-Operating Income	$0.8	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0		
Pretax Income	($18.5)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$117.0	$259.0	$361.0	$422.0	$470.0	$504.0	$525.0	$545.5	$566.0	$577.5	$589.0	$412.5	$330.0	NM	
% of Revs	NM	NM	NM	NM	NM	NM	NM	35.5%	50.8%	56.4%	57.8%	58.8%	58.6%	58.3%	57.7%	57.2%	56.3%	55.6%	53.2%	66.0%		
Income Taxes								$41.0	$90.7	$126.4	$147.7	$164.5	$176.4	$183.8	$190.9	$198.1	$202.1	$206.2	$144.4	$115.5	NM	
Income Tax Rate								35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%		
Net Income - Operations	($18.5)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$76.1	$168.4	$234.7	$274.3	$305.5	$327.6	$341.3	$354.6	$367.9	$375.4	$382.9	$268.1	$214.5	NM	
% Net Margin	NM	NM	NM	NM	NM	NM	0.0%	23.0%	33.0%	36.7%	37.6%	38.2%	38.1%	37.9%	37.5%	37.2%	36.6%	36.1%	34.6%	42.9%		
Extraordinary Items	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0		
Reported Net Income	($18.5)	($50.0)	($55.0)	($70.0)	($100.0)	($78.0)	$0.0	$76.1	$168.4	$234.7	$274.3	$305.5	$327.6	$341.3	$354.6	$367.9	$375.4	$382.9	$268.1	$214.5	NM	
Interest Add-Back	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0		
EPS (GAAP) - Before Ex. Items	($41.10)	($2.65)	($2.25)	($2.75)	($3.85)	($2.90)	$0.00	$2.45	$5.30	$7.15	$8.10	$8.80	$9.15	$9.25	$9.35	$9.40	$9.30	$9.20	$6.25	$4.85	NM	- Profitable in 2020 following the launch of VRS-317
Growth	NM	NM	NM	NM	NM	NM	NM	NM	+116%	+35%	+13%	+9%	+4%	+1%	+1%	+1%	-1%	-1%	-32%	-22%		
EPS - Extraordinary Items	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		
EPS - Reported	($41.10)	($2.65)	($2.25)	($2.75)	($3.85)	($2.90)	$0.00	$2.45	$5.30	$7.15	$8.10	$8.80	$9.15	$9.25	$9.35	$9.40	$9.30	$9.20	$6.25	$4.85	NM	
Shares - Fully Diluted (MM)	0.5	19.0	24.5	25.2	26.0	26.8	27.6	30.9	31.8	32.8	33.8	34.8	35.8	36.9	38.0	39.1	40.3	41.5	42.8	44.1		- Diluted shares; assuming some onward dilution from options

Source: Cowen and Company

Figure 25 Worldwide Pediatric GHD Market Build

US PEDIATRIC GHD MARKET BUILD

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Nutropin (AQ)														
US Market Share	27%	26%	26%	25%	26%	23%	22%	20%	18%	17%	17%	16%		- Market leader in the US
Estimated Patients ('000)	5.6	5.7	5.7	5.6	5.6	5.4	5.5	5.3	5.2	5.2	5.0	4.9		
Average Price Per Year	$21	$22	$23	$23	$24	$25	$26	$26	$27	$28	$29	$30		- Based upon NuSpin 20 dose
Estimated US Ped Sales ($MM)	$120	$125	$130	$130	$135	$135	$140	$140	$140	$145	$145	$145	+1%	- Assumes 50% pediatric
Genotropin														
US Market Share	19%	19%	18%	18%	17%	17%	16%	16%	16%	16%	14%	14%		
Estimated Patients ('000)	3.1	3.0	2.8	2.7	2.4	2.4	2.1	2.1	2.0	2.0	1.8	1.7		
Average Price Per Year	$27	$28	$29	$30	$31	$32	$33	$34	$35	$36	$37	$38		- Based upon 0.6 mg dose MiniQuick Pen
Estimated US Ped Sales ($MM)	$85	$85	$80	$80	$75	$75	$70	$70	$70	$70	$65	$65	-3%	- Assumes 50% pediatric
Humatrope														
US Market Share	16%	16%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%		
Estimated Patients ('000)	2.7	2.7	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.2	2.2	2.1		
Average Price Per Year	$26	$26	$27	$28	$29	$30	$31	$31	$32	$33	$34	$35		- Based upon 24 mg dose
Estimated US Ped Sales ($MM)	$70	$70	$75	$75	$75	$75	$75	$75	$75	$75	$75	$75	+1%	- Assumes 50% pediatric
Norditropin Flexpro (Nordiflex)														
US Market Share	17%	18%	19%	20%	21%	22%	23%	24%	26%	26%	27%	28%		
Estimated Patients ('000)	4.8	4.9	5.1	5.2	5.4	5.5	5.6	5.7	5.8	5.6	5.7	5.8		
Average Price Per Year	$16	$16	$17	$17	$18	$18	$19	$19	$20	$20	$21	$22		- Based upon 15 mg Flexpro dose
Estimated US Ped Sales ($MM)	$75	$80	$85	$90	$95	$100	$105	$110	$115	$115	$120	$125	+5%	- Assumes 50% pediatric
VRS-317														
US Market Share						**7%**	**15%**	**21%**	**26%**	**30%**	**33%**	**35%**		- Conservatively assumes 35% penetration within 7 years
Estimated Patients ('000)						**1.3**	**3.2**	**4.5**	**5.8**	**6.9**	**7.6**	**8.0**		
Average Price Per Year						**$30**	**$32**	**$33**	**$35**	**$36**	**$38**	**$40**		- Priced at parity to market leading daily therapies
Estimated US Ped Sales ($MM)						**$40**	**$100**	**$150**	**$200**	**$250**	**$280**	**$320**	**+41%**	- 2018 US launch
Other Daily hGH Therapies														
US Market Share	22%	24%	25%	26%	28%	26%	25%	23%	22%	21%	21%	20%		
Estimated Patients ('000)	4.0	4.5	4.7	4.9	5.2	5.2	5.4	5.4	5.4	5.4	5.4	5.3		
Average Price Per Year	$25	$26	$27	$27	$28	$29	$30	$31	$32	$33	$34	$35		- On the high end of daily hGH therapies
Estimated US Ped Sales ($MM)	$100	$115	$125	$135	$145	$150	$160	$165	$170	$175	$180	$185	+5%	- Other, newer hGH products gaining share
Total US Ped Patients ('000)	**20.2**	**20.8**	**21.1**	**21.1**	**21.2**	**22.3**	**24.2**	**25.4**	**26.4**	**27.2**	**27.6**	**27.8**	**+3%**	**- Treated patients increase with long-acting therapies**
Total US Ped Market Sales ($MM)	**$450**	**$475**	**$495**	**$510**	**$525**	**$575**	**$650**	**$710**	**$770**	**$830**	**$875**	**$915**	**+7%**	**- Long-acting therapies to expand the market**
% Growth		**6%**	**4%**	**3%**	**3%**	**10%**	**13%**	**9%**	**8%**	**8%**	**5%**	**5%**		**- Market growth coming from approval of new agents**

EU PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total EU Ped Market Sales ($MM)	$550	$580	$610	$640	$670	$705	$735	$765	$795	$820	$845	$870	+4%	- EU market experiencing modest growth
% Growth		5%	5%	5%	5%	5%	4%	4%	4%	3%	3%	3%		
VRS-317														
EU Market Share						**5.0%**	**15.0%**	**20.0%**	**25.0%**	**30.0%**	**33.0%**	**35.0%**		- Conservatively assumes 35% penetration within 7 years
Estimated EU Ped Sales ($MM)						**$40**	**$110**	**$150**	**$200**	**$250**	**$280**	**$300**	**+40%**	- 2018 EU launch
Other Daily hGH Therapies														
EU Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	80.0%	75.0%	70.0%	67.0%	65.0%		
Estimated EU Ped Sales ($MM)	$550	$575	$600	$650	$675	$675	$625	$600	$600	$575	$575	$575	**+0%**	

JAPAN PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total Japan Ped Market Sales ($MM)	$450	$480	$515	$550	$585	$620	$655	$690	$725	$760	$790	$820	+6%	- More growth to come from new therapies with better efficacy
% Growth		7%	7%	7%	6%	6%	6%	5%	5%	5%	4%	4%		
VRS-317														
Japan Market Share								**5.0%**	**15.0%**	**18.0%**	**20.0%**	**22.0%**		- Conservatively assumes 20%+ penetration within 5 years
Estimated Japanese Ped Sales ($MM)								**$30**	**$110**	**$140**	**$160**	**$180**	**+57%**	- Potential 2020 Japan launch
Other Daily hGH Therapies														
Japan Market Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	95.0%	85.0%	82.0%	80.0%	78.0%		- Current therapies don't have great efficacy
Estimated Japan Ped Sales ($MM)	$450	$475	$525	$550	$575	$625	$650	$650	$625	$625	$625	$650	+3%	

WORLDWIDE PEDIATRIC GHD MARKET OPPORTUNITY

	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	CGR	Comments
Total WW Ped Market Sales ($MM)	$1,450	$1,535	$1,620	$1,700	$1,780	$1,900	$2,040	$2,165	$2,290	$2,410	$2,510	$2,605	+5%	- Continued growth to come from long-acting therapies
% Growth		6%	6%	5%	5%	7%	7%	6%	6%	5%	4%	4%		

Source: Cowen and Company; IMS; PriceRx

Valuation Methodology And Risks

Valuation Methodology

Pharmaceuticals/Specialty

For our valuation methodology, we arrive at fair value utilizing a discounted cash flow (DCF) approach to derive our 12-month price target.

Investment Risks

Pharmaceuticals/Specialty

Risks include: (1) growing competitive dynamics in the specialty pharmaceuticals space; (2) the ability of management to execute on external growth by successfully acquiring new strategic, accretive products; (3) the ability to grow organically and keep the product pipeline robust; (4) potential regulatory delays, rejections, or failures of pipeline products; (5) economic sensitivity of any self-pay products or weakening consumer demand; (6) domestic or international pricing pressures for marketed products; and (7) failure to execute on new product launches.

Risks To The Price Target

Versartis is an early stage clinical development company with a single product and with that carries risk. Failure of Versartis to successfully develop VRS-317, for which its valuation is solely predicated on, could result in a significant decrease to its valuation and corresponding share price.

Addendum

Stocks Mentioned In Important Disclosures

Ticker	Company Name
ACT	Actavis
AGN	Allergan
TEVA	Teva Pharmaceutical
VSAR	Versartis

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Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Rating System until May 25, 2013

Outperform (1): Stock expected to outperform the S&P 500

Neutral (2): Stock expected to perform in line with the S&P 500

Underperform (3): Stock expected to underperform the S&P 500

Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period

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Hold (b)	288	40.39%	8	2.78%
Sell (c)	18	2.52%	1	5.56%

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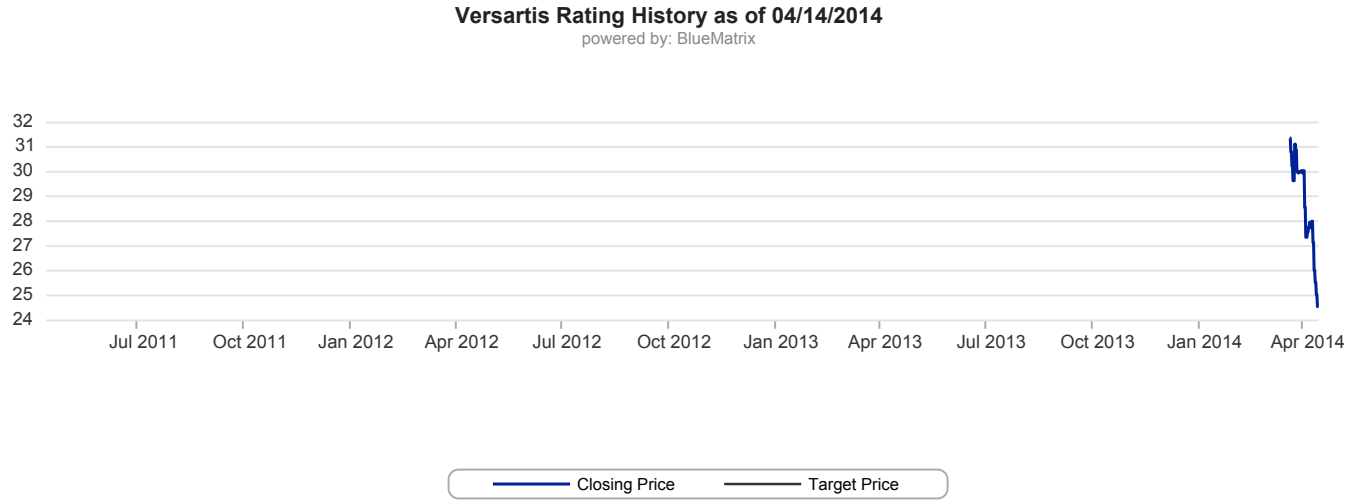

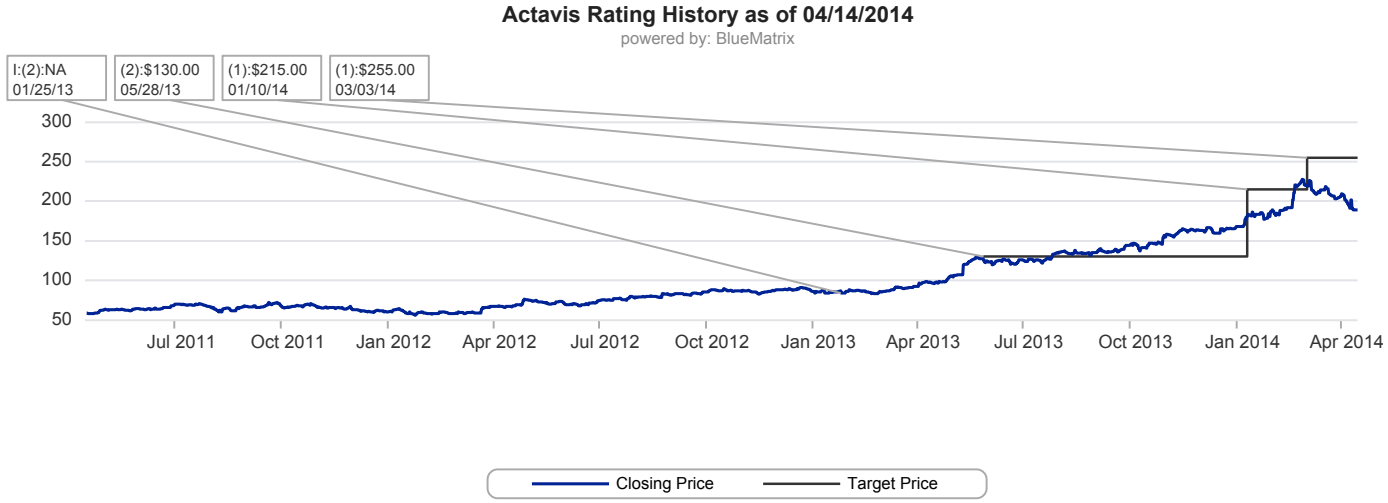

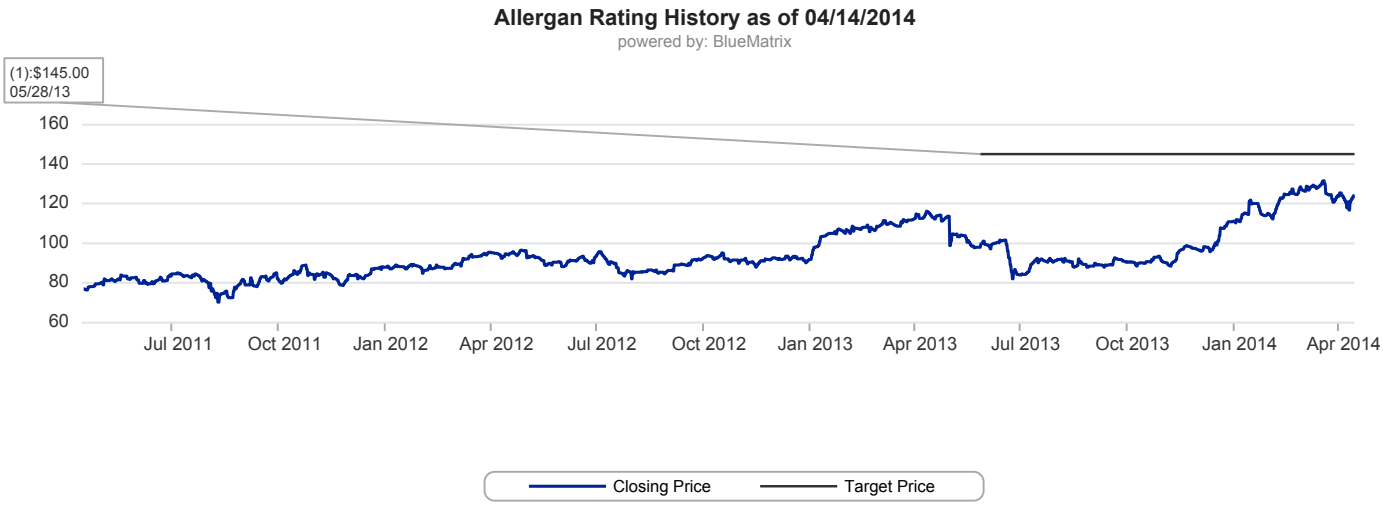

Rating Change - 2/4/2010 - Rating Outperform

Rating Change - 2/15/2007 - Outperform Rating

Legend for Price Chart:

I = Initation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | UR = Price Target Under Review | T = Terminated Coverage | $xx = Price Target | NA = Not Available

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