Radius Health

RDUS : NASDAQ : US$12.14

BUY

Target: US$21.00

John Newman, PhD - Canaccord Genuity Inc. (US)
JNewman@canaccordgenuity.com 212.389.8042

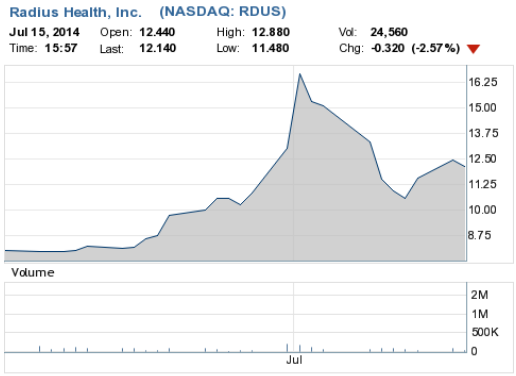
COMPANY STATISTICS:

Market Cap (M):	US$352.1
52-week Range:	7.46 - 17.32
Avg. Daily Vol. (000s):	74.8
Shares Out (M):	29.0
Forecast Return:	73.0%

EARNINGS SUMMARY:

FYE Dec		2013A	2014E	2015E	2016E
Revenue (M):		0.0	0.0	0.0	82.1
EPS:		(3.97)	(3.05)	(3.75)	(1.84)
Revenue (M):	Q1	-	0.0A	-	-
	Q2	-	0.0	-	-
	Q3	-	0.0	-	-
	Q4	-	0.0	-	-
Total		0.0	0.0	0.0	82.1
EPS:	Q1	-	(1.00)A	-	-
	Q2	-	(0.57)	-	-
	Q3	-	(0.66)	-	-
	Q4	-	(0.81)	-	-
Total		(3.97)	(3.05)	(3.75)	(1.84)

SHARE PRICE PERFORMANCE:



Source: Interactive Data Corporation

COMPANY DESCRIPTION:
Radius is a biotechnology company focused on discovering, developing, and commercializing drugs for endocrine disorders. Its wholly owned lead asset is abaloparatide, in Phase 3 for treatment of postmenopausal osteoporosis.

All amounts in US$ unless otherwise noted.

Life Sciences -- Biotechnology

$1B OSTEOPOROSIS PLAY IS DE-RISKED BY KNOWN MECHANISM; INITIATING WITH $21 TARGET, BUY

Investment highlights

$1B osteoporosis play set to replace Lilly's Forteo

We believe Radius' abaloparatide for osteoporosis could reach $1B in worldwide peak sales, providing an attractive investment opportunity. Importantly, the drug appears to have better efficacy and safety than Lilly's Forteo and should rapidly gain share of the current $1.2B Forteo market assuming approval.

Expect positive Phase 3 data YE14

Abaloparatide should show impressive fracture reduction in its Phase 3 osteoporosis study by YE14, providing meaningful near-term upside. We expect the drug to show a 50-60% reduction in fracture risk, enabling competitive commercial positioning.

Positive Phase 2 data, known mechanism lower risk

Abaloparatide showed better bone mineral density (BMD) improvements in Phase 2 head-to-head with Forteo, suggesting high probability of success in Phase 3. Also, abaloparatide's mechanism of action is similar to Forteo, an approved drug, lowering risk.

Establishing $21 price target, possible upside to $40

Our $21 price target is based on a probability-adjusted net present value (NPV) calculation assuming a 55% probability of success in Phase 3. 100% probability would result in a possible valuation of ~$40.

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INVESTMENT THESIS

We are initiating coverage of Radius Health with a BUY rating and $21 price target based on a $1B peak sales opportunity in osteoporosis and expected positive Phase 3 data by YE14. Radius Health owns worldwide rights to abaloparatide, a recombinant parathyroid peptide similar to Eli Lilly's Forteo. Abaloparatide has shown positive head-to-head data in a Phase 2 osteoporosis study versus Forteo with better safety and efficacy, which should result in favorable commercial positioning.

Positive Phase 3 data YE14E – major catalyst with reduced risk

We anticipate positive Phase 3 data by YE14 for abaloparatide demonstrating a strong reduction in fracture risk versus both placebo and Forteo, which should drive shares higher. Positive Phase 2 bone mineral density data head-to-head with Forteo reduces risk, and should increase investor confidence. Abaloparatide also has a nearly identical mechanism of action to Forteo, a drug that has been approved and marketed since 2002. The known mechanism of action for abaloparatide combined with better efficacy and safety greatly reduce the clinical and regulatory risk, and should also facilitate robust commercial uptake. Forteo causes high calcium levels and also has been associated with osteosarcoma. Importantly, Radius' abaloparatide does not cause high calcium levels, and also can be dosed higher with similar levels of osteosarcoma versus Forteo.

Abaloparatide poised to beat Forteo, study design favorable for commercial uptake

Abaloparatide appears poised to show better efficacy and safety versus Forteo head-to-head in Phase 3, which should facilitate rapid commercial uptake. Importantly, we believe abaloparatide is poised to show meaningfully better fracture reduction at the hip versus Forteo, a key measure for physicians. Commercial launch risk is also de-risked, in our view – a switch to abaloparatide from Forteo should be straightforward. We think abaloparatide is likely to be viewed as a "superior Forteo" with better efficacy and safety, and physicians' familiarity with Forteo should quicken the switch.

Pipeline provides additional upside

Radius has two additional assets in its pipeline that could hold additional upside, providing potential multi-step growth. Importantly, most early-stage biotechnology companies have only one asset to provide future growth, which can limit investor returns. Companies like Radius with more than one viable asset can provide multiple growth legs, and prove more attractive to investors. RAD1901 is a selective estrogen receptor down-regulator/degrader (SERD) currently in testing for breast cancer metastases, a problem for which no products exist that can cross the blood-brain barrier. RAD1901 is currently in Phase 1, and does cross the blood-brain barrier, where brain metastases are located. RAD1901 also demonstrated a reduction in the frequency and severity of moderate and severe hot flashes in a Phase 2 proof-of-concept study. Radius is also developing RAD140 for treatment of cachexia, frailty and breast cancer. RAD140 is a non-steroidal selective androgen receptor modulator (SARM) which has demonstrated the ability to increase lean muscle mass and bone density, applicable to cancer cachexia, muscle frailty, osteoporosis and breast cancer.

VALUATION

Our $21 price target is based on a probability-adjusted net present value (NPV) calculation for abaloparatide. We project US and ex-US peak sales of ~$650M and ~$350M by 2022 for abaloparatide. We model ex-US sales as either a royalty to Radius or partnership with an operating profit split, and probability each scenario by 50%. Our valuation assumes that Radius will receive FDA approval in mid-2016 and EMA approval in early 2017.

We modeled abaloparatide revenues for the US and ex-US osteoporosis markets based on insurance claims data which provides patients diagnosed with osteoporosis based on ICD-9 codes. Our US market build assumes a peak share of ~1.5% for abaloparatide, and our ex-US revenue build estimates a similar peak share. After estimating peak sales for abaloparatide, we apply relevant cost of goods sold (7%), discounts and rebates (7%), and royalty to Ipsen (5%) to arrive at gross profit. We then subtract research & development expense as well as sales, goods & administrative costs to arrive at operating profit. We assume a 37% tax rate ~2 years after launch in order to facilitate use of the company's non-operating-loss credits. We conservatively assume that abaloparatide remains branded until 2024, and then assume 70% share loss to generics in 2025. We utilize the 2025 net income as a terminal value. We subtract tax to arrive at net income, and discount back to launch at a rate of 13%. We then apply a 55% probability of approval, discount back to the present to arrive at our NPV for abaloparatide, and divide by total shares outstanding to derive a per-share value.

US abaloparatide worth $15

We model $15 for abaloparatide in the US based on peak sales of ~$650M by 2022 and a ~1.5% peak share of the US osteoporosis market. Our estimates assume ~3.9M treated osteoporosis patients by 2022 and pricing of ~$2,000 per month for abaloparatide. We build in 5% annual price increases based on an initial launch price of ~$1,550, and assume ~50% adherence based on published studies for Forteo. Our resulting annual price per patient is ~$13,000 by 2021. We also build in discounts and rebates of ~16.5% by 2021.

Ex-US abaloparatide worth $2

Abaloparatide will likely be partnered ex-US and we assume an operating profit split, although in our valuation we take into account that it could instead be promoted by a third party with Radius receiving royalties (see figure below). We estimate ex-US peak sales of ~$350M by 2021 based on peak share of 1.5% of ~4.7M treated patients. Our pricing is 40% lower than the US and we do not assume price increases. Similar to the US, we assume a ~50% adherence rate, but slightly lower discounts and rebates of ~12.5%.

Cash adds $2

We include ~$60M in cash in our price target, which adds ~$2 to bring the total to $21.

Figure 1: Radius valuation

Product	Peak Sales ($MM)	Year	NPV at launch	Probability Adjustment	Current Value ($MM)	Scenario probability	Value / Share
abaloparatide							
US	$649	2022	$1,073	55%	$429	100%	$15
Ex-US - co-promote	$346	2021	$390	55%	$134	50%	$2
Ex-US - royalty	$346	2021	$189	55%	$104	50%	$2
Total abaloparatide					**$563**		**$19**
Total Product Value					563		$19
Cash					60		$2
Total Equity Value					**623**		**$21**
Shares Outstanding (MM)					29		

Risk-Free Rate	3.0%
Beta	1.8
Risk Premium	6%
Discount Rate	13%

Source: Canaccord Genuity, Inc.

CATALYSTS

PHASE 3 DATA BY YE14 – NEAR-TERM UPSIDE

We expect positive Phase 3 data for abaloparatide in osteoporosis by YE14, head-to-head versus Forteo, which should boost shares. Fracture reduction for abaloparatide should be better versus Forteo for both vertebral (primary endpoint) and non-vertebral (hip) fractures at 18 months. We also expect safety to be better for abaloparatide versus Forteo, with abaloparatide showing lower incidence of hypercalcemia. Finally, we expect larger increase in bone mineral density for abaloparatide patients at the lumbar spine, hip, and femoral neck bone versus Forteo.

Investors will also look for a faster improvement in reduction of fracture risk for abaloparatide versus Forteo, which we believe will be clearly evident, further boosting shares. Importantly, reduction in fracture risk may occur more quickly versus Merck's odanacatib, which we believe will alleviate some of the competitive concerns given Merck's once-weekly oral formulation versus Radius' daily sub-Q injection.

Importantly, we do not expect any safety issues for abaloparatide with respect to antibody formation or osteosarcoma. We also do not expect any meaningful differences in injection site reactions for abaloparatide versus Forteo.

TRANSDERMAL UPDATE MAY SURPRISE

Radius is likely to give an update on formulation of abaloparatide into a transdermal microneedle patch during 2H14, which could surprise to the upside. Phase 2 data for the transdermal patch showed smaller bone mineral density increases versus subcutaneous injection, but Cmax was nearly identical. Transdermal abaloparatide has a much shorter Tmax than sub-Q, suggesting that AUC for the transdermal patch is lower than sub-Q, potentially resulting in lower efficacy. Reformulation work is underway for the transdermal microneedle patch, which could produce a viable formulation. We await updates from Radius during 2H14.

COMPANY OVERVIEW

Radius Health is a development-stage biotechnology company focused on the discovery, development and commercialization of drugs for osteoporosis as well as other endocrine-mediated disorders. Radius' lead product is abaloparatide, a recombinant, 34-amino acid peptide of parathyroid hormone-related protein PTHrP. Abaloparatide is in Phase 3 testing for the treatment of osteoporosis with the goal of reducing fracture risk. The drug has shown evidence of faster improvement in bone mineral density, which should translate into quicker reduction in fracture risk versus currently available drugs. Radius has licensed worldwide rights, excluding Japan, for abaloparatide from Ipsen.

Radius has two additional pipeline assets – RAD1901 and RAD140. RAD1901 is a selective estrogen receptor down-regulator/degrader (SERD) being developed for the treatment of brain metastases in brain cancer. Unlike other SERDs, RAD1901 is thought to efficiently cross the blood-brain barrier. RAD1901 is also being developed at lower doses for the treatment of vasomotor symptoms, specifically hot flashes. The drug has shown a reduction in the frequency and severity of moderate and severe hot flashes. RAD1901 was in-licensed from Eisai.

RAD140 is non-steroidal selective androgen receptor modulator (SARM) discovered internally at Radius. The drug has shown anabolic activity on muscle and bone in preclinical studies and has completed 28-day preclinical toxicology in both rats and monkeys. It is being considered for the treatment of cancer cachexia, muscle frailty and osteoporosis and also in the treatment of breast cancer.

Radius is a development-stage biotechnology company and is not expected to be profitable for a number of years. We expect the company to burn cash for Research & Development expenses related primarily to subcutaneous abaloparatide, but also for the transdermal version, as well as for RAD1901 and RAD140 studies. Radius currently plans to commercialize abaloparatide in the US, but is likely to seek a partner ex-US.

PRIMARY RISKS TO OUR OUTLOOK

Risks to our outlook and price target include the following: the Phase 3 study for abaloparatide in osteoporosis may be negative, or fail to meet investor expectations, resulting in downside to shares and our price target. Also, Phase 3 data may be positive in terms of efficacy, but show an unexpected safety signal, also resulting in downside to our price target. Antibody formation was been seen in Phase 2 studies, with one patient showing potential evidence of neutralizing antibodies.

Even assuming positive Phase 3 data for subcutaneous abaloparatide in osteoporosis, FDA approval may be delayed or may not occur at all, also resulting in downside to shares and our price target. FDA may also grant approval, but require large, lengthy and expensive post-approval studies, which could also result in downside to shares and our price target.

Clinical data from other osteoporosis products including anti-sclerostin antibodies from Amgen, Merck, Eli Lilly and Novartis could be viewed as superior to abaloparatide, pressuring shares. Competition from existing and new osteoporosis products could also result in lower revenues that expected, leading to downside to our estimates and the share price.

Although unlikely, a paragraph 4 challenge could be filed against Lilly's Forteo, a molecule closely related to abaloparatide, which investors may interpret as increasing risk for abaloparatide, and pressuring Radius shares. Forteo was approved as an NDA, where the ANDA pathway is well established. Even though Forteo is essentially a biologic, since it is a peptide, it is feasible although unlikely that a generic challenger could emerge. FDA has approved a generic version of Lovenox, a biologic approved via the NDA pathway, although the process took many years. If a generic version of Forteo were to reach the market, usage of abaloparatide could decline, resulting in downside to our estimates and price target. Also, if FDA were to approve a generic version of Copaxone, a peptide used to treat multiple sclerosis, investors may see increased risk of a generic challenge and approval for abaloparatide, as both products are classified as NDA filings for biologic peptides.

A transdermal microneedle formulation for abaloparatide may not be feasible, which investors may view as negative for life cycle management and commercial competitive positioning for Radius, pressuring shares. Even if a microneedle formulation can be developed to show equal efficacy to the subcutaneous formulation, FDA may require a full clinical study versus a bridging study, which would require additional funding and time to approval.

ABALOPARATIDE POTENTIAL $1B DRUG IN OSTEOPOROSIS

Abaloparatide should reach peak sales of $1B worldwide, according to our models, with minimal threat from generics as the drug is effectively a biologic. We believe that better efficacy and safety versus Forteo should result in robust commercial uptake, also facilitated by physicians' familiarity with Forteo. In short, we believe Radius has a likely blockbuster drug on its hands with a high likelihood of positive Phase 3 data and FDA approval.

Estimate $650M US peak sales by 2022

We model $650M US peak sales for abaloparatide in osteoporosis by 2022 based on a detailed revenue build derived from insurance claims data. Data indicate ~4.4M US patients diagnosed with osteoporosis, and ~90% treated, or ~4.0M by 2022. We assume peak share slightly lower than that of Forteo, currently at ~2%. Our peak share for abaloparatide in the US is 1.5% by 2022, resulting in ~59,000 patients on drug. We model a cost per month of ~$2,200 by 2022, based on an initial price of ~$1,600 at launch and 5% annual price increases. We assume ~50% adherence, resulting in an annual cost of ~$13,000 per patient by 2022 in the US. We also assume ~16.5% discounts and rebates, resulting in $650M in abaloparatide revenues in 2022.

We expect that Radius will partner abaoloparatide Ex-US and model two scenario: an ~20% royalty to Radius, or an operating profit split. For the operating profit split scenario, we assume the same COGS, discounts, and rebates, and tax as for our US revenue build.

Estimate $350M ex-US peak sales by 2022

We model $350M ex-US peak sales for abaloparatide in osteoporosis by 2022 based on a detailed revenue build. We assume the ex-US osteoporosis population is ~20% larger than the US, or ~4.8M treated patients by 2022. We assume peak share slightly lower than that of Forteo, currently at ~2%. Our peak share for abaloparatide ex-US? is 1.5% by 2022, resulting in ~71,000 patients on drug. We model a cost per month 40% lower than that in the US, or ~$930 by 2022. We do not assume price increases ex-US. We assume ~50% adherence, resulting in an annual cost of ~$5,600 per patient in 2017 ex-US. We also assume ~12.5% discounts and rebates ex-US by 2022, resulting in $350M in abaloparatide revenues.

Figure 2: Abaloparatide US revenue build

US Osteoporosis Market

($MM) [FY - DEC]	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
US Osteoporosis Market									
Diagnosed Patients (000's)	4,229	4,250	4,272	4,293	4,314	4,336	4,358	4,379	4,401
Percent Treated	90%	90%	90%	90%	90%	90%	90%	90%	90%
Treated Patients (000's)	3,806	3,825	3,844	3,864	3,883	3,902	3,922	3,941	3,961
Market Share									
Antiresorptive agents									
bisphosphonates									
Fosamax	20%	20%	20%	20%	20%	20%	20%	20%	20%
alendronate (generic)		5%	5%	5%	5%	5%	5%	5%	5%
Fosamax Plus D		1%	1%	1%	1%	1%	1%	1%	1%
Actonel	14%	14%	15%	15%	15%	15%	15%	15%	15%
Boniva	11%	11%	12%	12%	12%	12%	12%	12%	12%
Reclast	4%	3%	7%	7%	7%	7%	7%	7%	7%
biologics									
Prolia	9%	9%	4%	4%	4%	4%	4%	4%	4%
Selective Estrogen Receptor Modulators (SERMs)									
Evista	5%	5%	6%	6%	6%	6%	6%	6%	6%
Anabolic agents									
Forteo		1.7%	1.8%	1.3%	1.0%	0.8%	0.5%	0.5%	0.5%
abaloparatide		-	0.3%	0.7%	1.0%	1.3%	1.5%	1.5%	1.5%
abaloparatide patients (000's)	-	-	10	27	39	49	59	59	59
Cost/month		1,550	1,628	1,709	1,794	1,884	1,978	2,077	2,181
Doses/year		12	12	12	12	12	12	12	12
Adherence		50%	50%	50%	50%	50%	50%	50%	50%
Cost per patient (annual)	-	9,300	9,765	10,253	10,766	11,304	11,869	12,463	13,086
US abaloparatide demand	-	-	93,851	277,303	418,034	551,413	698,254	736,833	777,543
inventory build (drawdown)	-	-							
discounts and rebates	-	-	(11,731)	(37,436)	(60,615)	(85,469)	(115,212)	(121,577)	(128,295)
US abaloparatide Revenues (000s)	**-**	**-**	**82,120**	**239,867**	**357,419**	**465,944**	**583,042**	**615,255**	**649,248**

Source:Canaccord Genuity, Inc.

Figure 3: Abaloparatide ex-US revenue build

Ex-US Osteoporosis Market

Ex-US Osteoporosis Market	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Diagnosed Patients (000)	5,075	5,100	5,126	5,151	5,177	5,203	5,229	5,255	5,282
Treated Patients	4,567	4,590	4,613	4,636	4,660	4,683	4,706	4,730	4,753
Market Share									
Antiresorptive agents									
bisphosphonates									
Fosamax	20%	20%	20%	20%	20%	20%	20%	20%	20%
alendronate (generic)		5%	5%	5%	5%	5%	5%	5%	5%
Fosamax Plus D		1%	1%	1%	1%	1%	1%	1%	1%
Actonel	14%	14%	15%	15%	15%	15%	15%	15%	15%
Boniva	11%	11%	12%	12%	12%	12%	12%	12%	12%
Reclast	4%	3%	7%	7%	7%	7%	7%	7%	7%
biologics									
Prolia	9%	9%	4%	4%	4%	4%	4%	4%	4%
Selective Estrogen Receptor Modulators (SERMs)									
Evista	5%	5%	6%	6%	6%	6%	6%	6%	6%
Anabolic agents									
Forteo		1.7%	2.0%	1.6%	1.1%	0.9%	0.7%	0.5%	0.5%
abaloparatide		-		0.4%	0.9%	1.1%	1.3%	1.5%	1.5%
romosozumab									
abaloparatide patients (000's)	-	-	-	19	42	52	61	71	71
Cost/month		930	930	930	930	930	930	930	930
Doses/year		12	12	12	12	12	12	12	12
Adherence		50%	50%	50%	50%	50%	50%	50%	50%
Cost per patient (annual)	-	5,580	5,580	5,580	5,580	5,580	5,580	5,580	5,580
Ex-US abaloparatide demand	-	-	-	103,483	234,002	287,432	341,391	395,882	397,861
inventory build (drawdown)	-	-							
discounts and rebates	-	-	-	(12,935)	(29,250)	(35,929)	(42,674)	(49,485)	(49,733)
Ex-US abaloparatide Revenues (000s)	**-**	**-**	**-**	**90,548**	**204,751**	**251,503**	**298,717**	**346,397**	**348,129**

Source: Canaccord Genuity estimates

Forteo market should facilitate rapid abaloparatide uptake

Abaloparatide should see rapid market uptake assuming FDA approval due to its similar mechanism to Forteo, but likely better efficacy and safety. We believe that messaging to physicians regarding superior reduction in fracture risk and better safety vs. Forteo will be well facilitated due to head-to-head Phase 3 data for abaloparatide vs. Forteo. Also, Radius is well aware of the launch experience for Forteo, and plans to establish a patient hotline to answer questions, a patient management group in order to facilitate good compliance, and strong messaging to physicians in order to promote brand awareness. Radius also believes that its lower cost of goods versus Forteo will enable Radius to withstand any potential discounting by Lilly in order to attempt to maintain its branded Forteo sales.

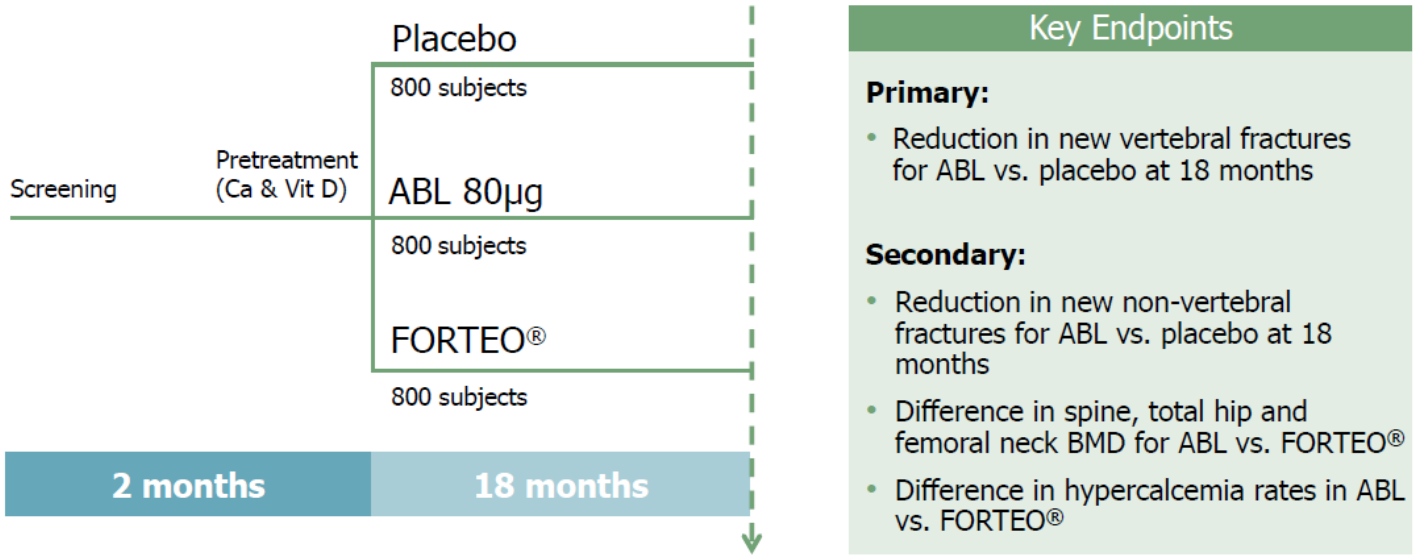
EXPECT POSITIVE PHASE 3 DATA YE14 – MAJOR CATALYST

We anticipate abaloparatide should demonstrate a statistically significant decrease in fracture risk versus placebo in Phase 3 by YE14, resulting in significant upside to the stock. We expect abaloparatide to show better efficacy and safety versus Forteo, based on results from Phase 2.

The Phase 3 study has randomized ~2,400 subjects 1:1:1 to treatment with either 80 ug abaloparatide, 20 ug Forteo, or placebo, with primary endpoint of vertebral fracture rate at 18 months for abaloparatide versus placebo. The study will also measure important secondary endpoints, including the critical **non-vertebral fracture rate**, which includes hip fractures. The hip fracture rate is very important to physicians, as many fractures due to osteoporosis are due to falls on the hip. Additional secondary endpoints include bone mineral density at the lumbar spine, hip, and femoral neck, as well as number of hypercalcemia events. **Importantly, abaloparatide will be compared head-to-head with Forteo for bone mineral density and hypercalcemic events, which should provide excellent commercial positioning for Radius.**

Radius has assumed a 7% fracture rate for placebo and 3% for abaloparatide at 18 months, the pivotal endpoint. The study is powered at 90%. FDA will assess the totality of data in terms of looking at the data at 24 months in addition to the 18-month primary endpoint.

Figure 4: Abaloparatide Phase 3 design



Source: Radius Health company presentations

Enrollment criteria for the Phase 3 study are typical for postmenopausal osteoporosis studies and include: ambulatory postmenopausal women age 50-85 diagnosed with osteoporosis. Women must have bone mineral density (BMD) T score ≤ 2.5 and > -5.0 at the lumbar spine (femoral neck) by dual energy x-ray absorptiometry (DXA) and radiological evidence of two or more mild or one or more moderate lumbar or thoracic vertebral fractures, or history of low trauma forearm, humerus, sacral, pelvic, hip, femoral, or tibial fracture with the last five years. Postmenopausal women >65 years of age who meet the fracture criteria but have a T score ≤ 2.0 and > -5.0 can be enrolled. Also, women >65 years of age who do not meet the fracture criteria may also be enrolled if their T score is ≤ -3.0 and > -5.0.

Women were excluded for any of the following reasons: a history of >4 mild or moderate spine fractures or any severe fracture. Abnormality of the spine or hip prohibiting assessment of bone mineral density, unexplained elevation of serum alkaline phosphatase, history of bone disorders, or a diagnosis of cancer with the last five years (excluding basal cell or squamous cancer of the skin). History of thyroid, parathyroid, or adrenal disorders, or malabsorptive syndromes or any chronic or recurrent diseases or disturbances that would interfere with the interpretation of study data or compromise the safety of the patient. Prior treatment with parathyroid hormone (PTH) or parathyroid hormone-related peptide (PTHrP). Prior treatment with bisphosphonates, fluoride, or strontium within the past five years or treatment with androgens, anabolic steroids, corticosteroids, or selective estrogen receptor modulators within the past 12 months (except hormone replacement therapy). Prior treatment with an investigational drug within the past 12 months. History of nephrolithiasis or urolithiasis within the past 5 years or history of osteosarcoma at any time.

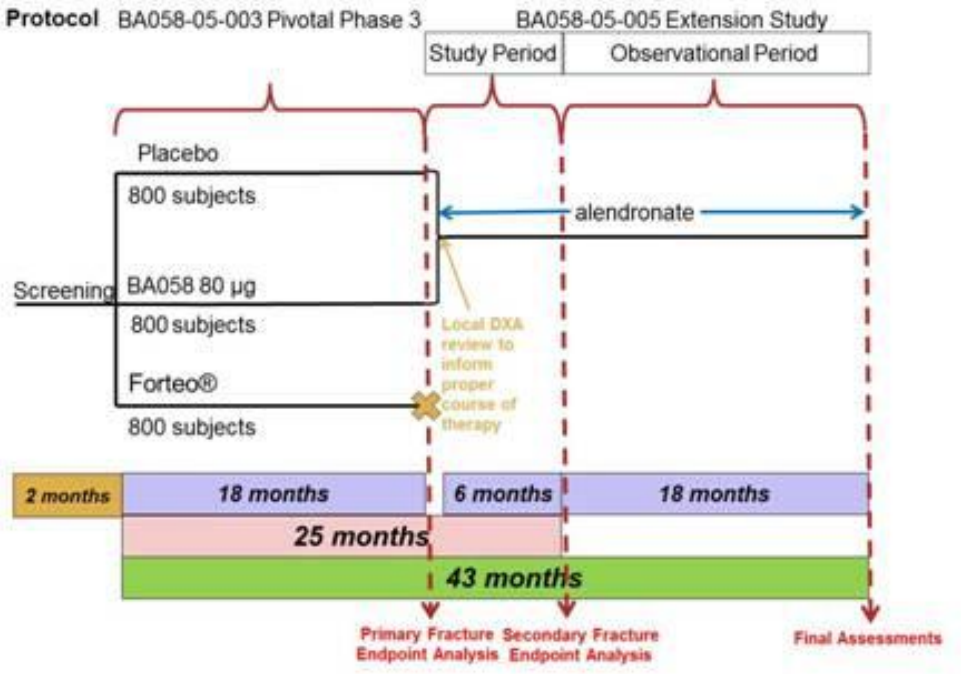
Study geography

The Phase 3 abaloparatide study for postmenopausal osteoporosis is being conducted internationally by Nordic, which has conducted pivotal Phase 3 studies in osteoporosis for sponsors including Amgen and Lilly. Countries enrolling patients include: US (Lakewood, Colorado; Miami, Florida; North Miami, Florida; Atlanta, Georgia; Bethesda, Maryland), Argentina (Buenos Aires), Brazil (Brasilia, Curitiba, Rio de Janeiro, Sao Paolo, Vitoria), Czech Republic (Brno, Pardubice, Prague), Denmark (Aalborg, Ballerup, Vejle), Estonia (Tallinn, Tartu), Hong Kong (Hong Kong), Lithuania (Vilnius), Poland (Bialystok, Katowice, Kielce, Lodz, Warsaw, Zgierz), and Romania (Bucharest).

24-month data feasible for FDA submission

Radius is conducting a 24-month extension study in order to provide FDA with 24-month fracture data upon NDA filing Link to 8K describing extension. Radius' primary endpoint in the Phase 3 study is vertebral fracture rate for abaloparatide versus placebo at 18 months. Radius will enroll patients in a 24-month extension study, and submit data to FDA at 6 months, or 24 months after starting the abaloparatide study. Patients receiving either abaloparatide or placebo who complete 18 months of treatment will be eligible to enroll in a 24-month extension study where they will receive alendronate. Forteo patients are not eligible to enroll in the extension study. Radius will then measure fracture reduction at 24 months, six months after the primary 18-month endpoint (Figure 5). **Importantly, nearly all abaloparatide and placebo patients have enrolled in the open-label extension study where both arms will receive alendronate for six months after 18 months treatment in the randomized portion of the study.**

Figure 5: Abaloparatide extension study



Source: Radius Health 8K filing 12/12/2013

Subjects who are deemed eligible for alendronate therapy will receive open-label oral alendronate treatment at a total dose of 70 mg once per week for 24 months. As mentioned above, fracture reduction will be measured for patients formerly receiving abaloparatide versus patients formerly receiving placebo at 24 months of total treatment. Patients will then continue treatment in the open-label study for an additional 18 months, bringing their total treatment time on abaloparatide/placebo (18 months)+ alendronate (24 months) to 42 months.

Statistical analysis at 24 months will evaluate fracture incidence, including both vertebral and non-vertebral, and bone mineral density (BMD), as well as safety. All specified endpoints will be summarized by treatment group and study period using standard descriptive statistics (n,mean, SD, median, minimum, maximum or n and %, as appropriate). Fracture incidence, either clinically or radiologically determined, based on clinical events or protocol-directed vertebral x-rays at Month 6 of this extension study, will be tabulated. In addition, BMD results from the six months of treatment with alendronate will also be tabulated based on the treatment arm patients were randomized to in the BA058-05-003 study, with additional tabular categories for the results from the entire contiguous 24 months from baseline of study BA058-05-003 through the end of study BA058-05-005, as well as the results during the 18 months of study BA058-003, for subjects who eventually enter study BA058-005.

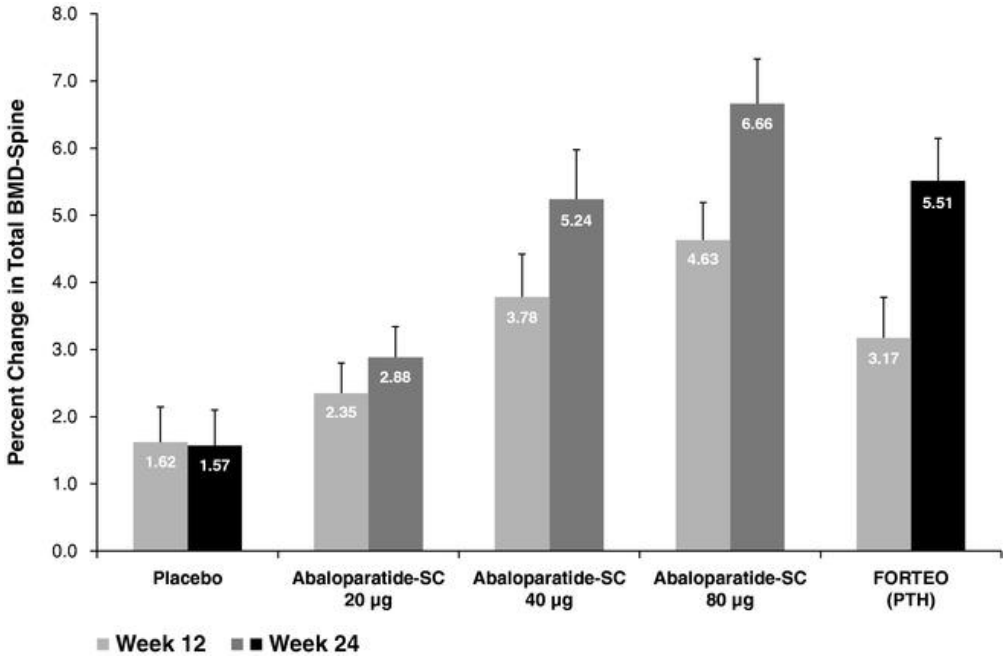
Positive Phase 2 data, similar mechanism to Forteo lower risk

Abaloparatide's positive bone mineral density data in Phase 2 suggest a high probability of success in Phase 3, and should propel shares higher. Abaloparatide showed larger improvements in bone mineral density at the 20, 40, and 80 ug dose versus placebo at 12 and 24 weeks. Abaloparatide also showed larger improvements in BMD at 40 and 80ug versus 20ug Forteo at 12 and 24 weeks. We expect that improvement in bone mineral density for abaloparatide seen in Phase 2 should translate into improvement in non-vertebral fracture, the primary endpoint in Phase 3.

The Phase 2 abaloparatide study enrolled n=270 patients with n=222 randomized and n=221 treated and included in the ITT. N=55 patients continued into an additional n=24 weeks of treatment. A total of n=155 patients were included in the efficacy population (per protocol) in the initial 24 weeks of treatment. The study enrolled postmenopausal women between 55 and 85 who had a BMD T score ≤ -2.5 at the lumbar spine or hip (fermoral neck) by DXA or a BMD T score ≤ -2.0 and a prior low trauma fracture or additional risk factor. The study randomized patients to either placebo, one of three doses of abaloparatide (20, 40, 80ug), or 20ug Forteo.

The 40 and 80ug abaloparatide dose arms showed a statistically significant increase in BMD at the lumbar spine versus baseline at week 12 ($p = 0.0013$ and $p < 0.001$). The difference was not statistically significant in the 20ug, placebo, or 20ug Forteo groups vs baseline at 12 weeks. At week 24, the 40 and 80ug abaloparatide doses showed a mean change in BMD at the spine statistically significant versus baseline ($p < 0.001$ both groups). The mean change was also statistically significant for the 20ug Forteo group, but not for the 20ug abaloparatide group or for placebo.

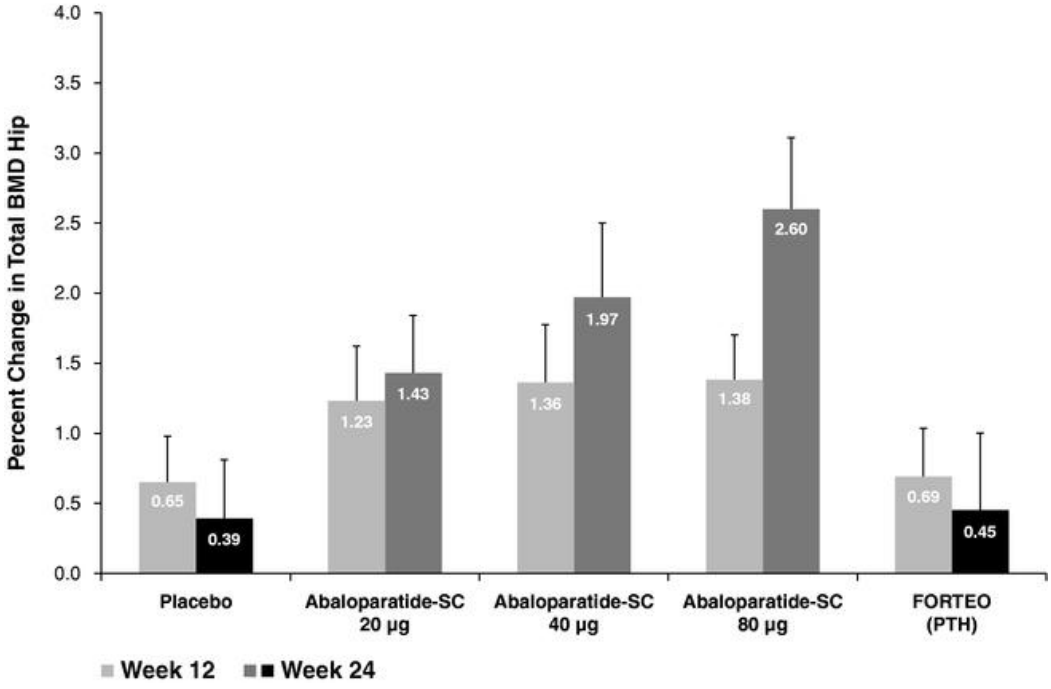
Figure 6: Total spine bone mineral density abaloparatide Phase 2



Source: Radius SEC filings

Abaloparatide also showed better improvements for bone mineral density at the hip for all doses versus placebo and Forteo at 12 and 24 weeks, which suggests a critical commercial advantage for abaloparatide. Physicians often view changes in bone mineral density and fracture at the hip as much more meaningful than the spine. **Importantly, abaloparatide showed a much higher magnitude of BMD gains at the hip versus Forteo at all doses** (Figure 7). In fact, bone mineral density for Forteo actually declined slightly from week 12 to week 24. The 80ug abaloparatide dose showed a 2.60% BMD increase at the hip at 24 weeks versus only 0.39% for placebo and 0.45% for 20ug Forteo.

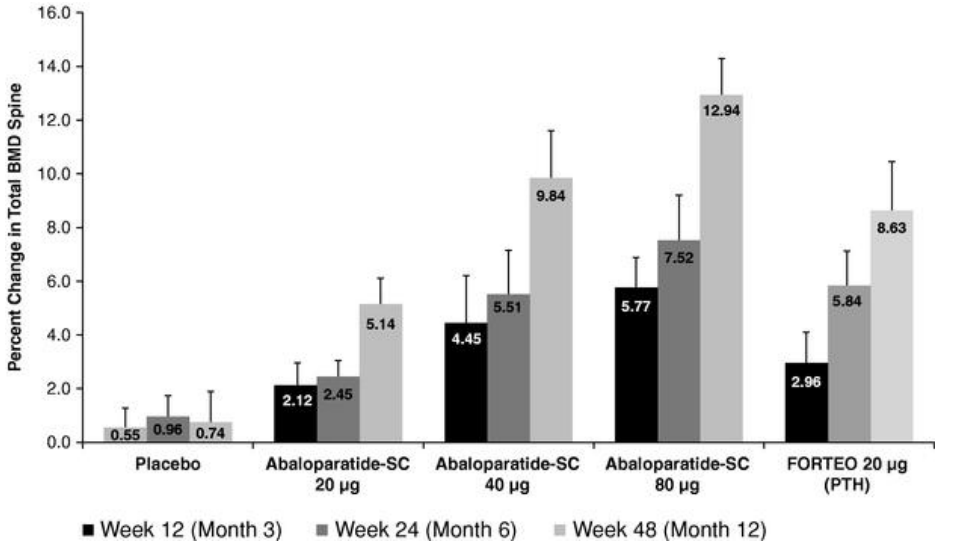
Figure 7: Total hip bone mineral density abaloparatide Phase 2



Source: Radius SEC filings

Radius has also analyzed bone mineral density data at the spine for a subset of patients available at 48 weeks (n=55), showing continued increases in bone mineral density at the spine for abaloparatide. The 80ug abaloparatide dose showed 12.95% increase in bone mineral density at the spine versus 8.63 for 20ug Forteo and 0.74% placebo.

Figure 8: Total spine bone mineral density 12 months abaloparatide Phase 2

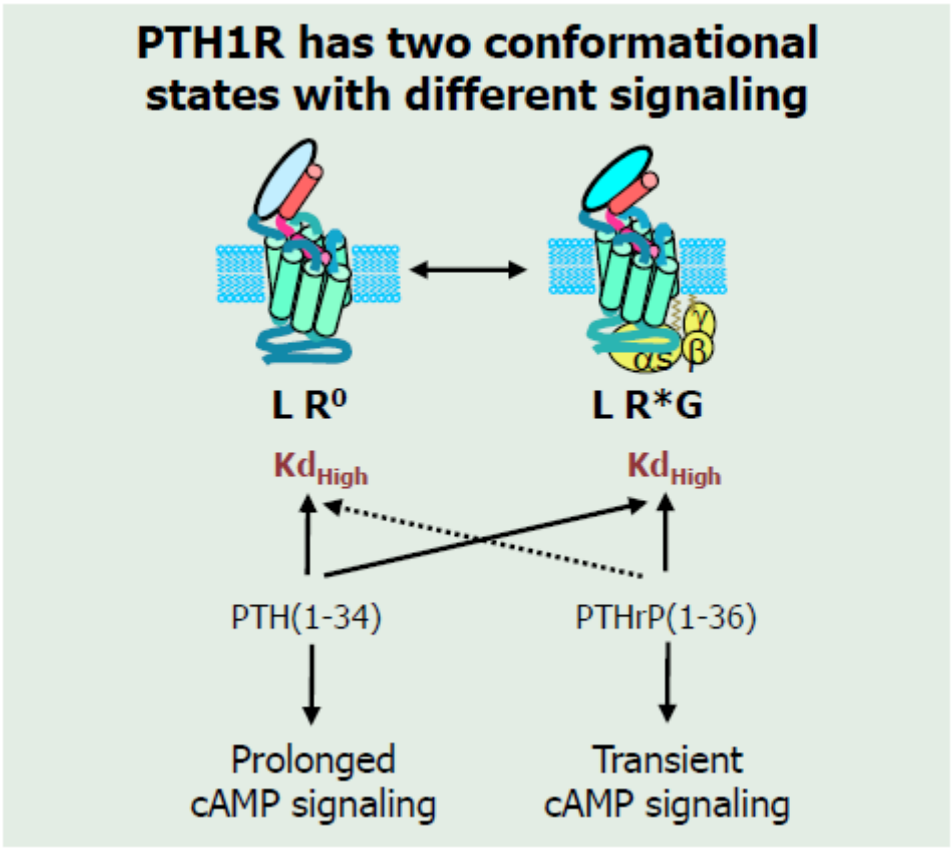


Source: Radius SEC filings

Known mechanism of action for abaloparatide reduces risk

Abaloparatide's mechanism is similar to that of Forteo, which reduces development risk, in our view. Abaloparatide and Forteo both act on the ParaTHyroid hormone 1 (PTH1) receptor, but bind with different selectivity. PTH1 has two different conformational states with different signaling, one with prolonged cAMP signaling and one with transient cAMP signaling. Abaloparatide seems to interact with both conformational states, whereas Forteo seems to interact with only the prolonged cAMP signaling conformation. Also, abaloparatide has characteristics similar to the longer 36-amino acid peptide that can maintain the PTH1 receptor in a more active state for a longer period of time. Abaloparatide is a 34-amino acid peptide of Parathyroid hormone-related peptide (hPTHrP). Importantly, abaloparatide has receptor engagement more similar to the 36 amino acid peptide of hPTHrP versus Forteo's receptor engagement. Also, the on-rate for abaloparatide is similar to hPTHrP and Forteo, but the off rate is significantly faster.

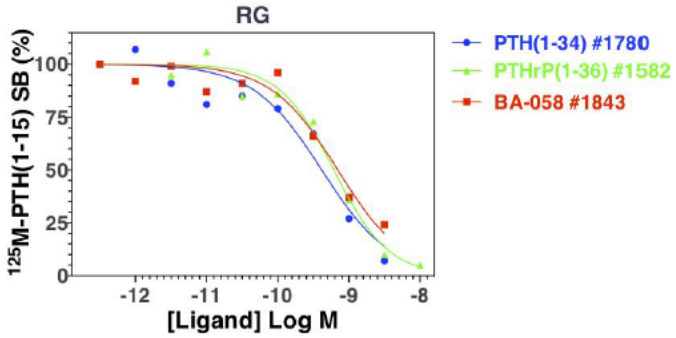
Figure 9: Two conformational states PTH1



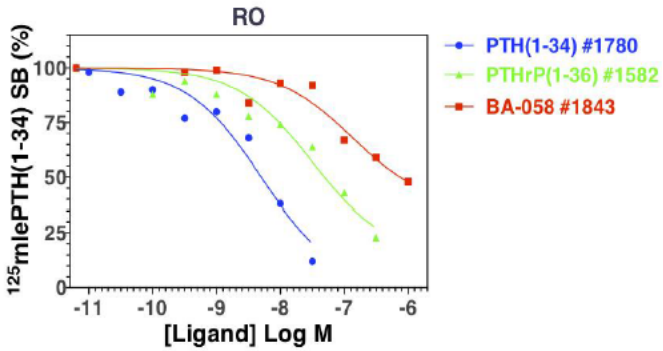
Source: Ferrandon et al., Nat. Chem. Biol. 2009

Figure 10: PTHR1 receptor engagement

PTHR1 Receptor Engagement



	Bottom	Top	LogEC50	HillSlope
PTH(1-34) #1780	0.000	100.000	-9.381	-0.897
PTHrP(1-36) #1582	0.000	100.000	-9.212	-1.128
BA-058 #1843	0.000	100.000	-9.156	-0.923



	Bottom	Top	LogEC50	HillSlope
PTH(1-34) #1780	1.638e-016	100.000	-8.298	-0.750
PTHrP(1-36) #1582	14.537	100.000	-7.506	-0.750
BA-058 #1843	36.204	100.000	-6.870	-0.750

- Greater R0/RG selectivity for Abaloparatide (BA058), than for either PTH or PTHrP
- Interaction kinetics show similar receptor on-rate, but faster off-rate

Source: Radius Health company presentations

Abaloparatide safety enables higher dosing, better efficacy

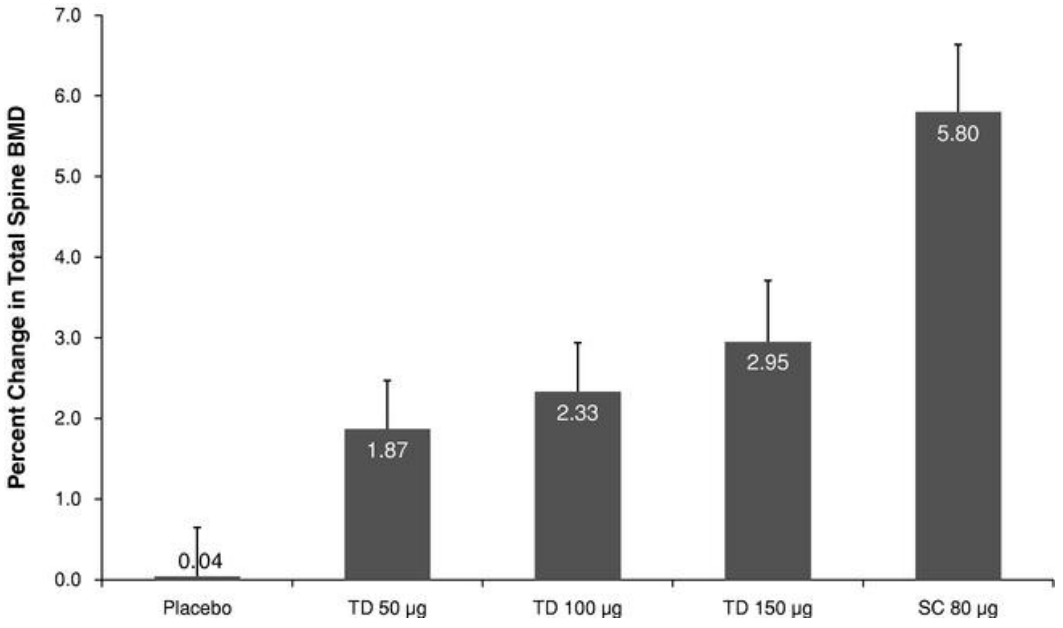
Abaloparatide is being dosed at 80ug in Phase 3 versus 20ug for Forteo, which we believe enabled better efficacy in Phase 2. Abaloparatide shows much lower hypercalcemia than Forteo, which we believe enables higher dosing. Other adverse events appear similar between the 80ug dose for abaloparatide and the 20ug dose for Forteo. Although n=16 patients had abaloparatide antibodies after 24 weeks of treatment, all were low-titer and none were associated with safety events or attenuation of treatment efficacy.

TRANSDERMAL WORK COULD BOOST PROFILE VERSUS FORTEO

Radius is working to develop a transdermal microneedle patch formulation of abaloparatide that could be much more attractive to patients and physicians. Microneedle patches can be applied with a simple applicator to the skin for five minutes, after which time the drug is absorbed through the skin. Data to date have shown good safety, but lower efficacy than the 80ug subcutaneous abaloparatide dose (Figure 10). It is well known that higher doses of drug are often needed for microneedle patches, as some of the drug remains on the microneedle.

Radius may update investors during H2/14 regarding the ongoing formulation work for transdermal abaloparatide. Assuming successful formulation and efficacy levels similar to the subcutaneous formulation, Radius plans to run a bridging study. Ultimately, the microneedle patch could be introduced after initial approval of the sub-Q multidose pen injector, providing life cycle management for abaloparatide and a competitive edge to Forteo.

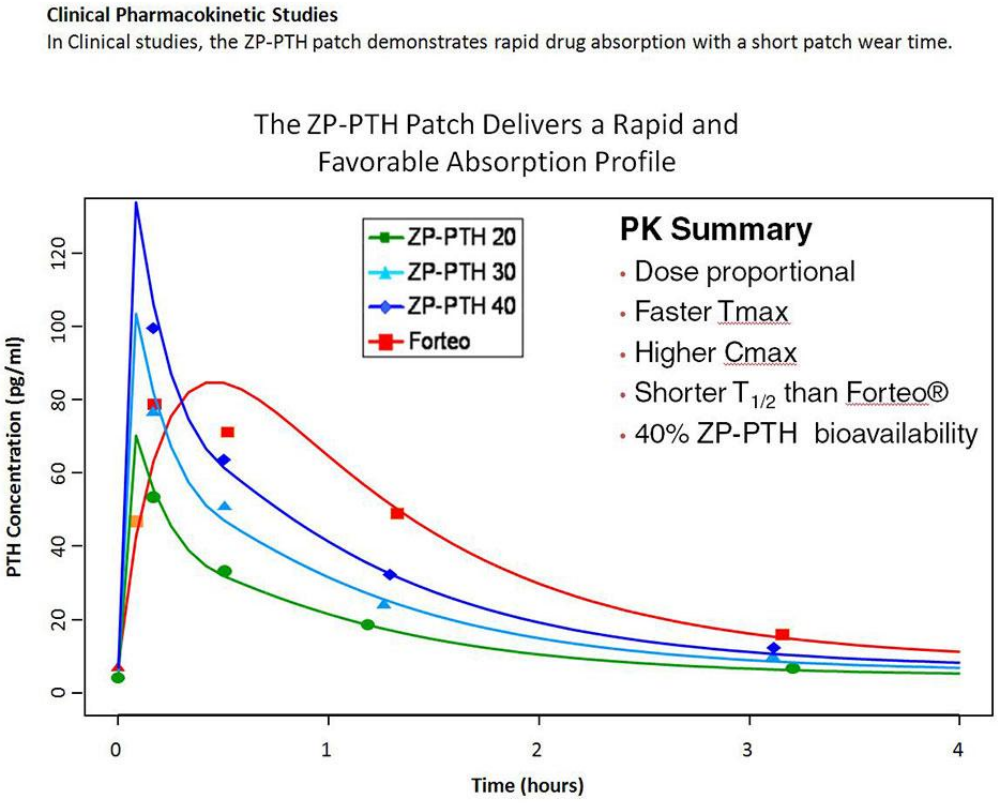
Figure 11: Abaloparatide transdermal Phase 2 study



Source: Radius SEC flings

It known from work done by other sponsors, such as Zosano, that the pK for drugs administered via microneedle varies substantially versus injection. Specifically, Cmax is often higher, and Tmax often shorter. Therefore, we believe that establishing an AUC via microneedle patch similar to subcutaneous injection may be more challenging. As shown in Figure 11, Zosano has conducted a Phase 2 study evaluating different microneedle formulation concentrations of Forteo versus the sub-Q Forteo. The Cmax for ZP-PTH is significantly higher than that of sub-Q Forteo, and the Tmax is shorter that is, Forteo administered via microneedle patch reaches peak concentration faster than sub-Q. However, one can surmise that AUC for the microneedle patch may be lower, decreasing the total drug exposure for the microneedle patch versus sub-Q injection.

Figure 12: Zosano pK study Forteo microneedle patch



Source: Zosano company presentations

OSTEOPOROSIS COMPETITIVE LANDSCAPE MANAGEABLE

Abaloparatide faces competition from anti-sclerostin antibodies being developed by Amgen, Lilly and Novartis, and cathepsin-K inhibitors being developed by Merck. However, the clinical profile of abaloparatide to date appears very competitive. Abaloparatide would also face competition from existing osteoporosis therapies, including generic oral bisphosphonate inhibitors, Lilly's Forteo, and Amgen's Prolia. However, we believe that abaloparatide would be preferably utilized in more severe osteoporosis patients due to its speed in building bone as evidenced by bone mineral density, which is likely to result in faster time to reduction in fracture risk. Importantly, abaloparatide would be the only FDA approved anabolic for building bone other than Forteo, whereas all other approved agents are anti-resorptives.

Anti-sclerostin comparison to abaloparatide favorable to date

The main competitive threat to abaloparatide commercial success is development of anti-sclerostin antibodies by Amgen, Lilly and Novartis. However, abaloparatide's Phase 2 data compare well versus AMG-785 to date, as shown in Figure 12. Importantly, abaloparatide appears to have a stronger effect at one year versus AMG-785 in terms of spine BMD and Femoral Neck BMD. However, AMG-785 does seem to be slightly faster in terms of building bone at six months at the spine versus abaloparatide.

Importantly, AMG-785 will require monthly visits to a physician's office, whereas abaloparatide can be self-administered by the patient, which is more convenient. Also, AMG-785 will require three injections per dose, whereas abaloparatide will require one daily injection.

Figure 13: Abaloparatide vs. AMG 785

	Abaloparatide - SC Phase 2[1]		AMG 785 Phase 2[2]	
Product	Abaloparatide	Forteo	AMG 785	Forteo
Dose	80 mcg	20 mcg	210 mg	20 mcg
Dosing frequency	daily	daily	monthly	daily
Injections per dose	1	1	3	1
Self / Physician	self	self	physician	self
Spine mean % BMD change from baseline - 6 n	6.7%	5.5%	8.2%	4.8%
Spine mean % BMD change from baseline - 12	12.9%	8.6%	11.3%	7.1%
Femoral Neck mean % BMD change from base	4.1%	2.2%	3.7%	1.1%

(1) Abaloparatide-SC study n=221 (24 weeks) and n=55 (48 weeks), 5 arms

(2) AMG 785 study n=419 (12 months), 9 arms

Source: Radius SEC flings

AMG 785 is currently in Phase 3 with data expected by late 2016/early 2017. The primary endpoint is rate of clinical fracture at 24 months, with secondary endpoints including bone mineral density. Post-menopausal osteoporosis patients will receive either romosozumab or oral alendronate for 12 months, followed by all patients receiving an additional 12 months of oral alendronate.

As mentioned above, AMG 785 has shown interesting bone mineral density improvement at the lumbar spine, total hip, and femoral neck at 12 months (Figure 13). Going forward, it will be important to monitor the magnitude and rate of change for fracture improvement as well, as this is most informative for commercial performance. The Phase 2 AMG 785 study enrolled n=419 patients at n=28 study centers in Argentina, Austria, Belgium, Canada, Denmark, Spain, and the US. A total of n=367 patients were randomized to one of five doses of romosozumab (70, 140, 210 mg 1x monthly, 140, 210 mg every three months), or to one of two open-label comparators (70 mg oral alendronate weekly or 20ug sub-Q Forteo daily). Throughout the study, all participants were required to take at least 1000mg of calcium and 800 IU of vitamin D daily.

Figure 14: Romosozumab Phase 2 data (AMGN) post-menopausal osteoporosis

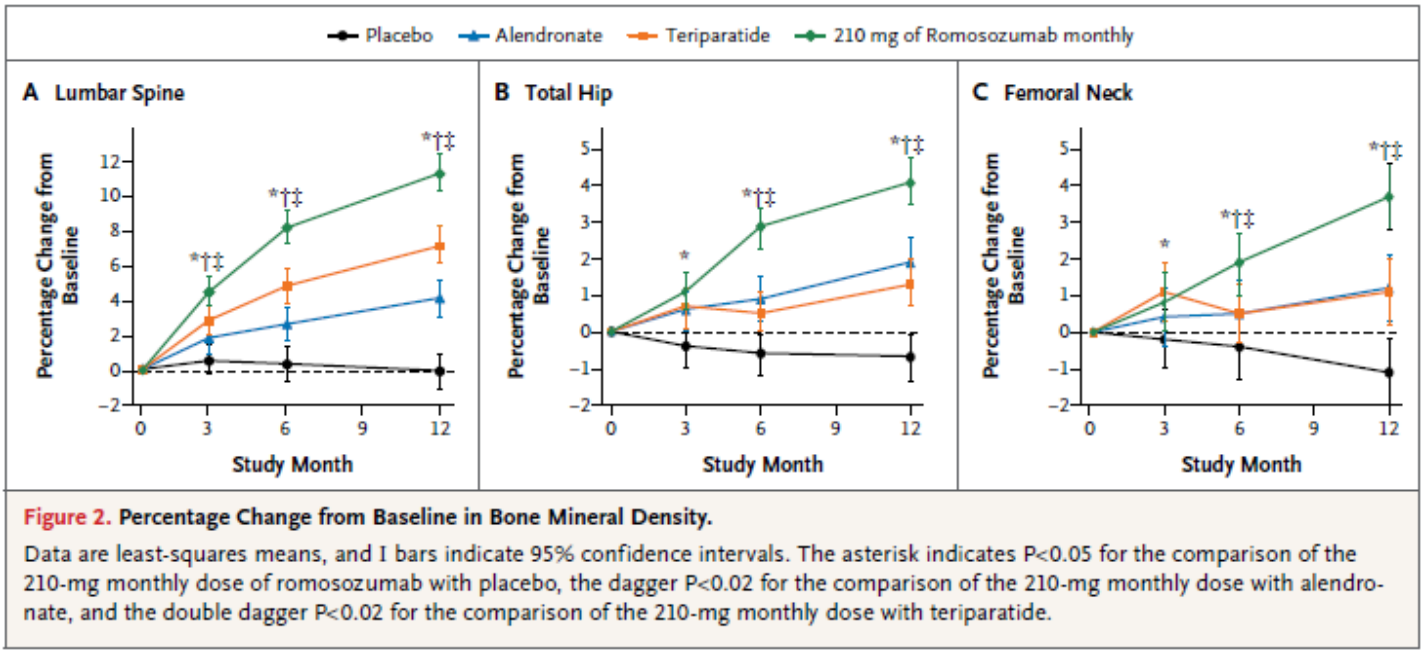


Figure 2. Percentage Change from Baseline in Bone Mineral Density.

Data are least-squares means, and I bars indicate 95% confidence intervals. The asterisk indicates P<0.05 for the comparison of the 210-mg monthly dose of romosozumab with placebo, the dagger P<0.02 for the comparison of the 210-mg monthly dose with alendronate, and the double dagger P<0.02 for the comparison of the 210-mg monthly dose with teriparatide.

Source: NEJM 370;5

Figure 15: Romosozumab Phase 2 data (AMGN) post-menopausal osteoporosis

Table 2. Percentage Change from Baseline in Bone Mineral Density at the Lumbar Spine at Month 12.*

Variable	Pooled Placebo (N=50)	Alendronate (N=51)	Teriparatide (N=49)	Romosozumab				
				140 mg Every 3 Mo (N=52)	210 mg Every 3 Mo (N=53)	70 mg Monthly (N=49)	140 mg Monthly (N=48)	210 mg Monthly (N=50)
No. of participants with available data	47	47	46	49	51	44	46	49
Mean change in bone mineral density at lumbar spine — % (95% CI)	−0.1 (−1.2 to 0.9)	4.1 (3.0 to 5.1)	7.1 (6.1 to 8.2)	5.4 (4.4 to 6.5)	5.5 (4.4 to 6.6)	5.4 (4.3 to 6.4)	9.1 (8.0 to 10.2)	11.3 (10.3 to 12.4)
P values								
Comparison of romosozumab with pooled placebo	—	—	—	<0.001	<0.001	<0.001	<0.001	<0.001
Comparison of romosozumab with alendronate	—	—	—	NS	NS	NS	<0.001	<0.001
Comparison of romosozumab with teriparatide	—	—	—	0.03	0.03	0.03	0.03	<0.001

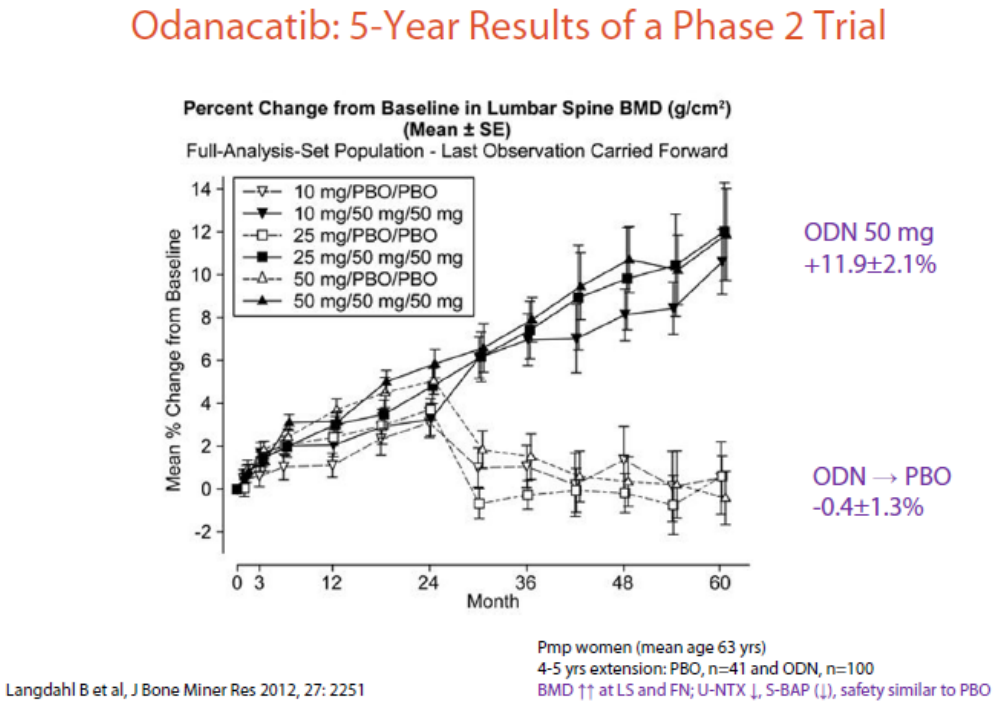
* Data include all the participants who underwent randomization, had bone mineral density measured at baseline, and had at least one measurement of bone mineral density after baseline and on or before the 12-month visit. NS denotes not significant.

Source: NEJM 370;5

Merck's oral cat-K key competitor

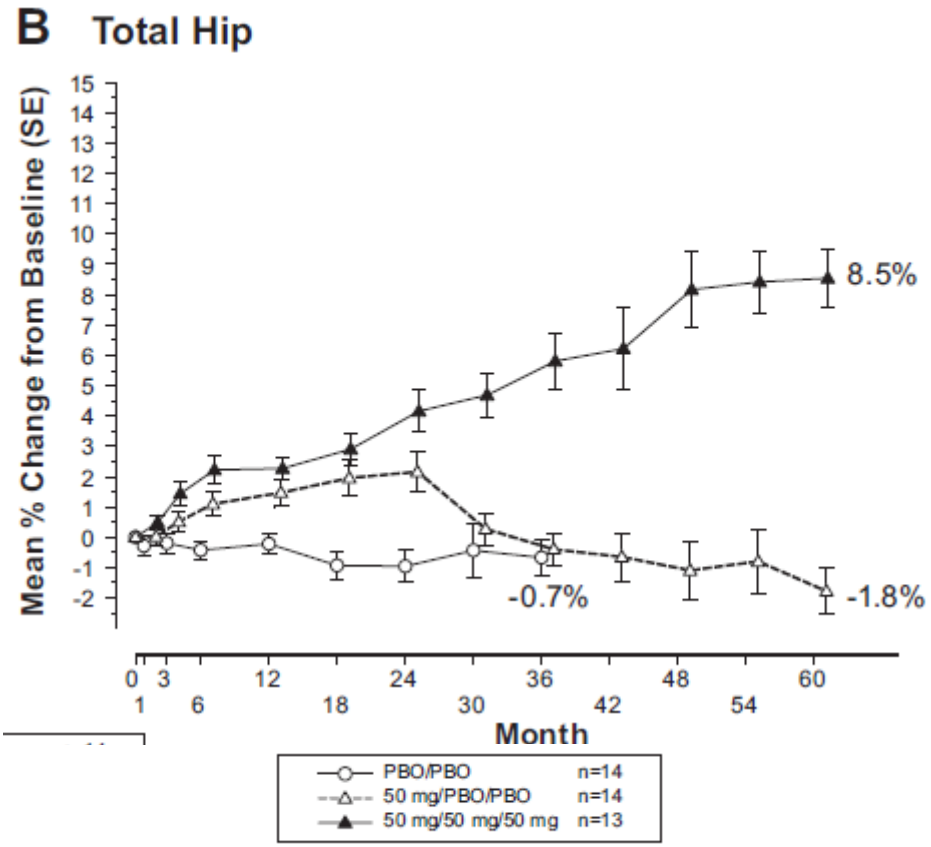
Merck's odanacatib is a key competitor for abaloparatide and is expected to be filed for FDA approval during H2/14. However, abaloparatide shows a much higher magnitude of bone mineral density improvement at 12 months at both the spine and hip. Thus, we believe physicians will utilize abaloparatide for more severe patients and odanacatib for less severe patients. Importantly, abaloparatide showed a much higher increase in bone mineral density at 12 months at the spine (12% vs. ~3.5%) vs. Merck's cathepsin-K inhibitor. We await additional data for bone mineral density at the hip for abaloparatide at 12 months and also at 24 months.

Figure 16: Merck odanacatib five-year bone mineral density data – spine



Source: Langdahl B et al, J Bone Miner Res 2012, 27: 2251

Figure 17: Merck odanacatib five-year bone mineral density data – hip



Source: Langdahl B et al, J Bone Miner Res 2012, 27: 2251

Phase 3 odanacatib data and FDA filing expected H2/14

Merck plans to present Phase 3 data for odanacatib, its cathepsin-K inhibitor during H2/14, with key fracture rates expected to be disclosed. We expect Merck to discuss reduction in facture risk, similar to other large osteoporosis studies. We will also look carefully at the safety profile for odanacatib, since numerical imbalances exist for stroke and atrial fibrillation, morphea, and atypical fractures. Importantly, morphea, or skin thickening and itching, occurred in about 0.2% of the population and caused an earlier cathepsin-K program called balicatib, to be terminated. Data for odanacatib regarding stroke and atrial fibrillation will be most critical to assess its competitive risk profile versus abaloparatide.

Fracture reduction of ~50-60% needed for Phase 3

Abaloparatide will need to show a fracture reduction rate of ~50-60% at vertebral, non-vertebral, and hip sites in order to be competitive with current FDA-approved agents. Based on very strong bone mineral density gains seen in Phase 2, we believe Phase 3 data will meet this hurdle. Importantly, most approved drugs other than Forteo show substantial reduction of fracture risk at **both** non-vertebral and hip sites. We believe that strong results for abaloparatide would give significant differentiation versus currently

marketed drugs. Importantly, initial 18-month data should give a good indication of reduction of fracture risk, but subsequent 24- and 42-month readouts should produce an even better reduction in fracture risk.

Figure 18: Fracture reduction data for approved osteoporosis drugs

Fracture Data at 3 years

	Vertebral			
Drug	Control	Drug	Reduction	Relative reduction
Prolia	7.2%	2.3%	(4.9%)	(68%)
Fosamax	6.2%	3.2%	(3.0%)	(48%)
Actonel*	18.5%	13.9%	(4.6%)	(25%)
Boniva	9.6%	4.7%	(4.9%)	(51%)
Reclast	8.8%	3.9%	(4.9%)	(56%)
Evista	4.3%	1.9%	(2.4%)	(56%)
Forteo**	14.3%	5.0%	(9.3%)	(65%)

	Non-Vertebral			
	Control	Drug	Reduction	Relative reduction
Prolia	8.0%	6.5%	(1.5%)	(19%)
Fosamax	10.7%	8.5%	(2.2%)	(21%)
Actonel*	8.4%	5.2%	(3.2%)	(38%)
Boniva	8.2%	9.1%	0.9%	11%
Reclast	10.7%	8.0%	(2.7%)	(25%)
Evista	9.3%	8.8%	(0.5%)	(5%)
Forteo**	5.5%	2.6%	(2.9%)	(53%)

	Hip			
	Control	Drug	Reduction	Relative reduction
Prolia	1.2%	0.7%	(0.5%)	(42%)
Fosamax	0.8%	0.2%	(0.6%)	(75%)
Actonel*	1.4%	1.8%	0.4%	25%
Boniva	0.6%	0.8%	0.2%	33%
Reclast	2.5%	1.4%	(1.1%)	(44%)
Evista	0.7%	1.0%	0.3%	43%
Forteo**	0.7%	0.2%	(0.5%)	(71%)

*new or worsening

**18 month exposure

Source: www.fda.gov

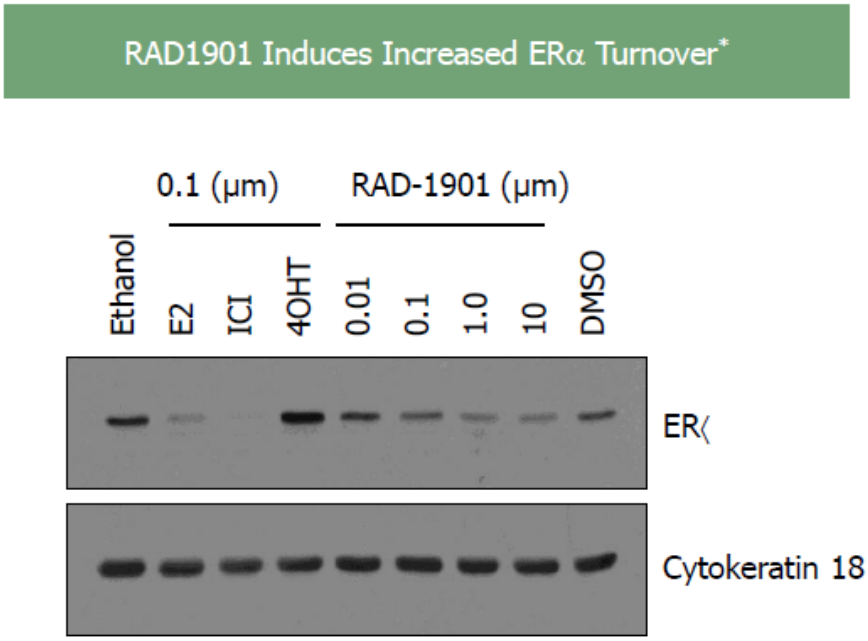
PIPELINE PROVIDES ADDITIONAL UPSIDE

In addition to abaloparatide, Radius is developing RAD1901, a selective estrogen receptor down-regulator/degrader (SERD) currently in testing for breast cancer metastases, a problem for which no products exist that can cross the blood-brain barrier. RAD1901 is also being tested for treatment of vasomotor symptoms at a low dose including hot flashes. Radius is also developing RAD140 for treatment of cachexia/frailty and breast cancer. We do not include either drug in our current valuation, providing potential upside if successful in the clinic.

RAD1901 acts as SERD at higher doses

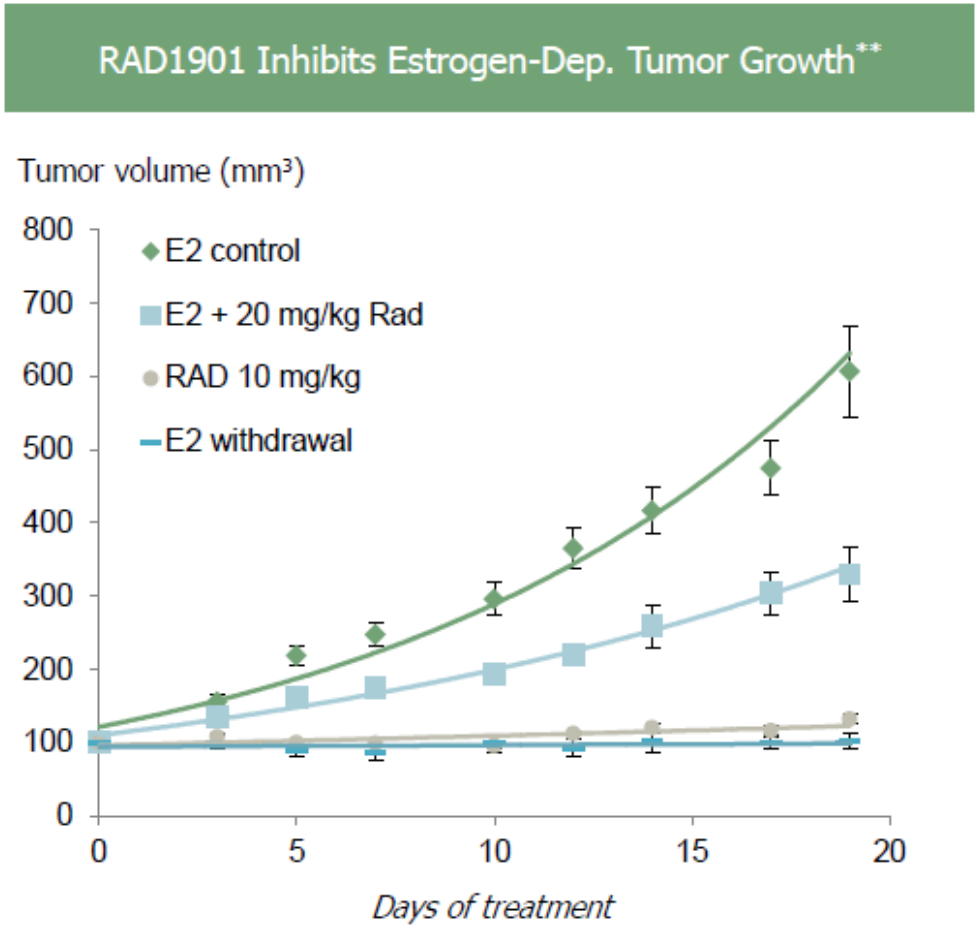
RAD 1901 is thought to act as a SERD at higher doses based on pre-clinical data showing the ability to degrade estrogen receptor (ER) and also cross the blood-brain barrier. The drug has also been shown to inhibit estrogen-dependent tumor growth. We believe these aspects are favorable for development in breast cancer brain metastases, where no FDA approved treatments are available. Importantly, Astra Zeneca's Faslodex is approved to treat hormone receptor positive metastatic breast cancer in postmenopausal women and has shown a ~4 month survival benefit. However, the drug cannot cross the blood-brain barrier and therefore is minimally effective on brain metastases.

Figure 19: RAD1901 preclinical data



Source: Radius corporate presentation

Figure 20: RAD1901 inhibition of Estrogen-dependent tumor growth



Source: Radius corporate presentations

RAD1901 entering Phase 1b for breast cancer mets H2/14

Radius plans to initiate a Phase 1b study for RAD1901 in breast cancer metastases in H2/14 and will file for orphan designation. The drug will initially target ~19,00 patients, and could eventually split the ~$645M market with Faslodex in the ER-positive metastatic breast cancer market alone. Importantly, we believe that the mechanistic similarity to Faslodex lowers development risk.

RAD140 in discovery, but targets attractive markets

Radius RAD140 is a nonsteroidal Selective Androgen Receptor Modulator (SARM) developed internally at Radius and may be suitable for use in attractive markets including cachexia, frailty, and breast cancer, where patients become weak. The drug demonstrated potent anabolic activity on muscle and bone in preclinical studies and completed a 28-day preclinical toxicology study in both rats and monkeys. RAD140 appears to show a high anabolic activity, receptor selectivity, potent oral cancer activity, and long half-life, making the drug attractive for indications where an increase in lean muscle mass and/or bone density may be beneficial.

INTELLECTUAL PROPERTY

Radius has licensed intellectual property for abaloparatide from Ipsen and for RAD1901 from Eisai. Importantly, we believe that the method of use patent for abaloparatide will provide meaningful protection and that the composition of matter patent expiring in 2016 may be extended. Importantly, Forteo has long been without data exclusivity and no paragraph 4 challenge has been filed, suggesting a method of use patent for abaloparatide should be sufficient for protection of abaloparatide. We present patents for abaloparatide and RAD140 in Figure 21.

Figure 21: Radius intellectual property

Drug	Patent	Owner	Type	Status	Expiration
abaloparatide	5,969,095	Ipsen	composition	issued	2016
	7,803,770	Ipsen	method of use	issued	2028
	8,148,333	Ipsen	formulation	issued	2027
		Radius	microneedle	filed	2032
		Radius	combination use	file in 2015	2035
RAD1901	7,621,114	Eisai	composition	issued	2026
	8,399,520	Eisai	method of use	issued	2023
		Radius	method of use	filed	2027
		Radius	formulation	filed	2031
RAD140	8,067,448	Radius	composition	issued	2029
		Radius	method of use	issued	

Source: Radius SEC flings

FINANCIAL OVERVIEW

Radius health is a development stage-biotechnology company, and we expect substantial cash burn before the company may reach profitability. Radius has ~$60M in cash after its recent IPO and currently has no debt on its balance sheet. The company has ~$2M in warrants outstanding. Radius also has a liability of $24M to issue shares of A-6 convertible preferred stock for services rendered in connection with the Nordic Work Statements. However, we could expect Radius to make future payments to Nordic in cash rather than issue shares.

Figure 22: Radius Health income statement

Radius Health, Inc.

(000's) [FY - DEC]

Revenues	2013A	1Q14A	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
abaloparatide - US								82,120	239,867	357,419	465,944	583,042
abaloparatide - Ex-US								-	90,548	204,751	251,503	298,717
Total								**82,120**	**330,415**	**562,170**	**717,447**	**881,759**
Income Statement	**2013A**	**1Q14A**	**2Q14E**	**3Q14E**	**4Q14E**	**2014E**	**2015E**	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**
Total Revenue	-	-	-	-	-	-	-	82,120	264,315	457,747	594,210	738,375
COGS	-	-	-	-	-	-	-	16,424	52,863	91,549	118,842	147,675
Gross Profit	-	-	-	-	-	-	-	65,696	211,452	366,198	475,368	590,700
Operating Expenses												
Research and development	60,536	9,717	11,716	14,142	18,096	53,671	78,094	63,671	60,593	70,860	90,593	124,479
abaloparatide-SC	45,977	8,107	9,728	11,674	14,009	43,518	31,170	21,819	15,273	15,273	15,273	15,273
abaloparatide-TD	11,459	185	278	416	624	1,503	24,975	17,483	12,238	8,566	5,996	4,198
RAD1901	-	-			1,000	1,000	12,100	14,520	23,232	37,171	59,474	95,158
RAD140	-	-				-	-					
other	3,100	1,425	1,710	2,052	2,462	7,649	9,850	9,850	9,850	9,850	9,850	9,850
General and administrative	6,829	2,139	2,300	2,500	2,700	9,639	13,200	57,484	85,902	102,993	133,697	166,134
Total Operating Expense	67,365	11,856	14,016	16,642	20,796	63,310	91,294	121,155	146,495	173,854	224,291	290,613
EBITDA												
Operating income	(67,365)	(11,856)	(14,016)	(16,642)	(20,796)	(63,310)	(91,294)	(55,459)	64,957	192,344	251,078	300,087
Other income (expense), net	9,085	(2,233)	(2,233)	(2,233)	(2,233)	(8,932)	(22,330)	(8,932)	(22,330)	(8,932)	(22,330)	(8,932)
Interest (expense) income, net	(2,410)	(399)	(399)	(399)	(399)	(1,596)	(3,990)	(1,596)	(3,990)	(1,596)	(3,990)	(1,596)
Pre-tax income (GAAP)	(60,690)	(14,488)	(16,648)	(19,274)	(23,428)	(73,838)	(117,614)	(65,987)	38,637	181,816	224,758	289,559
Pre-tax income (non-GAAP)												
Taxes (GAAP)	-	-	-	-	-	-	-	-	14,296	67,272	83,160	107,137
Tax rate (GAAP)	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
Net Income (GAAP)	(60,690)	(19,457)	(16,648)	(19,274)	(23,428)	(78,807)	(117,614)	(65,987)	24,341	114,544	141,597	182,422
GAAP EPS (diluted)	**($3.97)**	**($1.00)**	**($0.57)**	**($0.66)**	**($0.81)**	**($3.05)**	**($3.75)**	**($1.84)**	**$0.65**	**$2.90**	**$3.41**	**$4.19**
Basic shares outstanding	15,278	19,455	29,000	29,145	29,291	26,723	31,830	35,853	37,646	39,528	41,505	43,580
Diluted shares outstanding	15,278	19,455	29,000	29,000	29,000	26,614	31,830	35,853	37,646	39,528	41,505	43,580

Source: Company reports and Canaccord Genuity estimates

Figure 23: Radius balance sheet

Balance Sheet												
(000's) [FY - DEC]	2013A	1Q14A	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
ASSETS												
Current assets:												
Cash and cash equivalents	$ 12,303	$ 29,558	$ 65,160	$ 48,083	$ 26,797	$ 26,797	$ 32,981	$ 29,918	$ 67,323	$ 194,924	$ 349,569	$ 545,029
Marketable securities						-	-					
Prepaid expenses and other current assets	334	2,288	2,402	2,523	2,649	2,649	3,380	3,727	3,913	4,109	4,314	4,530
Total current assets	**12,637**	**31,846**	**67,563**	**50,605**	**29,446**	**29,446**	**3,380**	**33,644**	**71,237**	**199,033**	**353,883**	**549,559**
Property and equipment, net	76	60	63	66	69	69	89	98	103	108	113	119
Other assets	45	-	-	-	-	-	-	-	-	-	-	-
Total assets	**$ 12,758**	**$ 31,906**	**$ 67,626**	**$ 50,672**	**$ 29,515**	**$ 29,515**	**$ 3,469**	**$ 33,742**	**$ 71,339**	**$ 199,140**	**$ 353,996**	**$ 549,678**
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT												
Current liabilities:												
Accounts payable	$ 300	$ 279	$ 293	$ 308	$ 323	$ 323	$ 412	$ 454	$ 477	$ 501	$ 526	$ 552
Accrued expenses and other current liabilities	22,007	19,131	20,088	21,092	22,147	21,092	26,919	31,162	32,721	34,357	36,074	37,878
Current portion of note payable, net of discount	13,005	10,161	10,669	11,203	11,763	11,763	15,012	16,551	17,379	18,248	19,160	20,118
Total current liabilities	**35,312**	**29,571**	**31,050**	**32,602**	**34,232**	**34,232**	**43,690**	**48,168**	**50,576**	**53,105**	**55,761**	**58,549**
Note payable, net of current portion and discount						-	-					
Warrant liability	1,945	4,550	4,778	5,016	5,267	5,267	6,722	7,411	7,782	8,171	8,580	9,009
Other liabilities						-	-					
Total liabilities		**4,550**	**4,778**	**5,016**	**5,267**	**5,267**	**6,722**	**7,411**	**7,782**	**8,171**	**8,580**	**9,009**
Commitments and contingencies:												
Series B-2 Convertible Preferred Stock, $.0001 par		26,403				-	-					
Series B Convertible Preferred Stock, $.0001 par value;	43,892	44,742				-	-					
Series A-1 Convertible Preferred Stock, $.0001 par	78,737	80,497				-	-					
Series A-2 Convertible Preferred Stock, $.0001 par	93,977	95,818				-	-					
Series A-3 Convertible Preferred Stock, $.0001 par	12,232	12,499				-	-					
Series A-4 Convertible Preferred Stock, $.0001 par	271	271				-	-					
Series A-5 Convertible Preferred Stock, $.0001 par	525	525				-	-					
Series A-6 Convertible Preferred Stock, $.0001 par	23,168	33,277				-	-					
Stockholders' deficit:												
Common stock, $.0001 par value; 100,000,000 shares												
Additional paid-in-capital	-	-										
Accumulated deficit	(277,301)	(296,247)				-	-					
Total stockholders' deficit	(277,301)	(296,247)				-	-					
Total liabilities, convertible preferred stock and												
Total liabilities and equity	$ 12,758	$ 31,906	$ 62,848	$ 45,655	$ 24,248	$ 24,248	$ (3,253)	$ 26,331	$ 63,557	$ 190,969	$ 345,416	$ 540,670

Source: Company reports and Canaccord Genuity estimates

Figure 24: Radius statement of cash flows

Statements of Cash Flows

(000's) [FY - DEC]	2013A	1Q14A	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
CASH FLOWS USED IN OPERATING ACTIVITIES:												
Net loss	$ (60,690)	$ (14,488)	$ (16,648)	$ (19,274)	$ (23,428)	$ (73,838)	$ (106,402)	$ (65,987)	$ 24,341	$ 114,544	$ 141,597	$ 182,422
Adjustments to reconcile net loss to net cash used in operating activities:												
Depreciation and amortization	27	16	16	16	16	64	64	64	64	64	64	64
Amortization of premium (accretion of discount) on short-term investments,	27											
Stock-based compensation expense	1,508	511	511	511	511	2,044	2,044	2,044	2,044	2,044	2,044	2,044
Research and development expense settled in stock	13,118	2,717	2,717	2,717	2,717	10,868	10,868	10,868	10,868	10,868	10,868	10,868
Change in fair value of other current assets, warrant liability and other liabili	(9,087)					0	0					
Milestone payment settled with stock												
Non-cash interest	387	63	63	63	63	252	252	252	252	252	252	252
Changes in operating assets and liabilities:												
Prepaid expenses and other current assets	1,721	(690)	(114)	(120)	(126)	(1,051)	(732)	(346)	(186)	(196)	(205)	(216)
Other long-term assets												
Accounts payable	(250)	(21)	14	15	15	23	89	42	23	24	25	26
Accrued expenses and other current liabilities	8,222	2,453	(957)	(1,004)	(1,055)	(563)	0					
Cash flow from operations	**(45,017)**	**(7,206)**	**(14,398)**	**(17,077)**	**(21,286)**	**(59,967)**	**(93,816)**	**(53,063)**	**37,406**	**127,600**	**154,645**	**195,461**
CASH FLOWS PROVIDED BY INVESTING ACTIVITIES:												
Proceeds from sale of equipment	(2)					-	-					
Purchases of marketable securities	(17,070)					-	-					
Sales and maturities of marketable securities	21,043	-				-	-					
Cash flow from investing	**3,971**	**-**	**-**	**-**	**-**	**-**	**-**	**-**				
CASH FLOWS PROVIDED BY FINANCING ACTIVITIES:												
Proceeds from exercise of stock options	13					-	-					
Proceeds from issuance of common stock			50,000			50,000	100,000	50,000				
Payments on note payable	(8,187)	(2,907)				(2,907)	-					
Proceeds from the issuance of preferred stock, net	42,870	27,368				27,368	-					
Proceeds from note payable						-	-					
Discount on note payable						-	-					
Deferred financing costs						-	-					
Cash flow from financing	**34,696**	**24,461**	**50,000**	**-**	**-**	**74,461**	**100,000**	**50,000**	**-**	**-**	**-**	**-**
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(6,350)	17,255	35,602	(17,077)	(21,286)	14,494	6,184	(3,063)	37,406	127,600	154,645	195,461
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	18,653	12,303	29,558	65,160	48,083	12,303	26,797	32,981	29,918	67,323	194,924	349,569
CASH AND CASH EQUIVALENTS AT END OF PERIOD	**$ 12,303**	**$ 29,558**	**$ 65,160**	**$ 48,083**	**$ 26,797**	**$ 26,797**	**$ 32,981**	**$ 29,918**	**$ 67,323**	**$ 194,924**	**$ 349,569**	**$ 545,029**

Source: Company reports and Canaccord Genuity estimates

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	984	100.0%	

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Company	Disclosure
Radius Health	1A, 2, 3, 5, 7

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