



## INITIATING COVERAGE

### Pharmaceuticals/Specialty

September 6, 2013

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## KYTHERA BIOPHARMACEUTICALS INC

(NASDAQ:KYTH)

# Initiation: This Asset Looks Exceedingly Undervalued

We are initiating coverage of Kythera Biopharmaceuticals with a \$50 price target (if Kythera markets the product on their own) or \$70-75 (if a strategic buyer emerges), which we believe reflects the base-case commercial opportunity of their lead candidate ATX101 for the reduction of submental "chin" fat.

### Phase III Data From Pivotal US/Canadian REFINE1 And REFINE2 Trials To Be Released Shortly.

Kythera has built a robust clinical program, which includes 14 clinical trials and over 2,500 patients – and given the positive data reported by partner Bayer in the European pivotal Phase III trials along with the positive U.S. Phase IIb results – we believe that ATX101 has been significantly de-risked from a clinical perspective. In March 2012, Kythera initiated two pivotal trials for ATX101 in the US and Canada that have enrolled more than 1,000 patients in 70 centers. Data on the co-primary endpoints should be announced by early Q4. Assuming the outcome is positive, we believe Kythera could submit an NDA to the FDA in H1:2014 with a potential U.S. launch in H1:2015.

### ATX101 Looks Like A Very Attractive Asset.

For the above reasons, we believe that the ATX101 clinical program has now been well vetted by the Street and therefore, following the impending results, we believe the story will soon pivot to the commercial opportunity which we believe is significant (\$500MM+ in the U.S.). Given the lack of viable aesthetic products, it would not be surprising if a strategic buyer made the wealth-creating decision to acquire the asset which would relieve Kythera (and consequently our DCF) of significant SG&A spend given the strategic buyers' already in-place sales infrastructure. This would escalate our standalone base case DCF from \$50, to \$70-75. Nonetheless, if Kythera remains standalone, we are very confident that this experienced management/commercial team will be able to thoughtfully execute and maximize the opportunity. Either way, this asset looks exceedingly undervalued and we would be buying aggressively right here.

Please see addendum of this report for important disclosures.

#### Recommendation

Rating:	Outperform
Price Target (in \$):	\$50.00
Expected Return:	79.3%
Dividend:	NA
Enterprise Value (MM):	\$469.0

#### Earnings Per Share

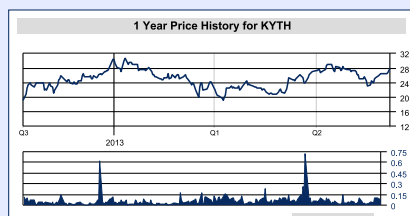
	2012A	2013E	2014E
Q1	--	\$(0.77)A	\$(0.38)
Q2	--	\$(0.67)A	\$(0.52)
Q3	--	\$(0.71)	\$(0.71)
Q4	--	\$(0.74)	\$(0.48)
FY	\$(2.62)	\$(2.90)	\$(2.10)
P/E	NM	NM	NM

#### Stock Statistics as of 09/05/2013 (in \$)

Price:	\$27.89
52W Range:	\$31.93-\$14.07
Shares Out (MM):	21.0
Market Cap (MM):	\$519.9
Net Debt (MM):	\$0.0

#### Fundamentals

Revenue (MM) ('12A)	19.7
Revenue (MM) ('13E)	0.0
Revenue (MM) ('14E)	40.0
EV/S ('12)	23.8x
EV/S ('13)	--
EV/S ('14)	11.7x





### **ATX101 To Become The First Non-Invasive Treatment For The Reduction Of Submental "Chin" Fat**

ATX101 is a proprietary synthetic formulation of sodium deoxycholate with 15+ years of patent protection, which works by lysing fat cells and has the potential to become the first FDA-approved, non-surgical treatment for the reduction of submental "chin" fat. ATX101 has demonstrated meaningful reductions in submental fat in clinical studies to date and has the potential to fill a treatment void that currently exists with facial aesthetic treatments. Currently, the only effective option for the reduction of submental fat is liposuction, which involves significant pain, down/recovery time, expense, and risk associated with surgery. Moreover, a significant amount of patients are not even candidates for surgery. We believe that ATX101 may be able to overcome many of these hurdles associated with treatment for submental fat and will likely expand the existing patient population.

### **Lower Face Market Opportunity Is Significant And Similar To Upper And Mid Face Markets, Which Are Addressed By Toxins And Fillers**

Currently, the upper and mid face regions are addressed by injectable toxin and filler treatments, but injectables have yet to reach the lower face region, which we feel could be addressed by ATX101. The markets for toxins and fillers are significant and have already been developed and if approved, we believe ATX101 could have a similar market opportunity (\$500MM+ in the US). Upon commercialization, we expect the majority share of initial ATX101 treatments to come from an estimated 900,000 existing toxin and filler users – primarily women – that have treatable submental fat. As experience with ATX101 in the commercial market increases, we expect treatment-naïve individuals to also consider and be willing to try ATX101. Currently, an estimated 90% of dermal filler patients are also treated with toxins and we expected there to be significant overlap with ATX101 as well. Our consultants have stated that they will readily inject ATX101 patients with a product such as a toxin in the same sitting, thereby increasing their overall revenue per patient.

### **ATX101 Will Require A Targeted, Specialty Sales Force Of 60-80 Representatives Upon Commercial Launch**

Within the US and Canada, Kythera has the rights to ATX101 commercialization, while Bayer will commercialize the product in other territories, including Europe. At the time of a U.S. launch, we expect Kythera to develop an initial specialty sales force of 60-80 representatives, which will expand as the launch progresses. Initially, we expect ATX101 to be in the hands of thought leading dermatologists and plastic surgeons who are existing injectable users – and once the ATX101 treatment experience has been established commercially – other specialists should follow. We estimate that the overall treatment cost will be in the range of \$2,000-3,500 – just below liposuction surgery alternatives and above one year of treatment with toxins/fillers. While ATX101 will be priced at a premium to toxins/fillers, we believe the cost will be justified by the potential 2-4 year duration of treatment that has already been observed in a long-term Phase II study. The procedure is not complicated and should involve a 30-32 gauge needle, (similar to Botox), and take 15-20 minutes with 20-30 microinjections in a grid-like pattern.



### **Bayer's European Phase III Results Increases Our Confidence In The Pending Outcome Of Ongoing US/Canadian Trials**

In April 2012, Kythera's partner Bayer announced positive results from two Phase III pivotal European trials for ATX101 in 723 patients. These trials were statistically significant on both primary endpoints, CR-SMFRS (a component of the composite endpoint for US/Canadian pivotal studies) and SSRS. Secondary clinical endpoints, which included PR-SMFRS (the other composite component), PR-SMFIS, and objective caliper measurements of submental fat were also dose-dependent and statistically significant. Additionally, patients reported statistically significant increases in happiness with the appearance of their chin fat and self-perceptions of youthfulness. Statistically significant differences in looking less overweight, feeling less embarrassed, bothered, self-conscious about the appearance of their chin fat, and overall satisfaction with ATX101 treatment when compared to placebo were also observed. The most common adverse events observed were pain/burning, bruising, swelling, and numbness and all adverse events were of mild to moderate severity and transient in nature. Interestingly, the incidence of bruising adverse events observed was very similar to placebo.

### **U.S. Phase IIb Trials Results Positive; A First Look At The PR-SMFRS Endpoint Used In Phase III Trials**

From 2009 to 2010, Kythera conducted a Phase IIb dose-ranging study in 129 patients in the U.S. The CR-SMFRS (clinician reported submental fat rating scale) and PR-SMFRS (patient reported submental fat rating scale) primary endpoints, which together constitute the composite endpoint being used in the ongoing Phase III US/Canadian trials, were statistically significant. Note that this is the first time the PR-SMFRS endpoint was measured by the Company following the updated Patient Reported Outcome (PRO) FDA guidance in 2009. Mean change in volume of submental fat as measured by MRI and the PR-SMFIS endpoint were also statistically significant in this study.

Future expected and potential milestones for Kythera are:

- ▶ Year-end 2013 – ATX101 MAA filing
- ▶ Late Q3 or Early Q4 – Announcement of top-line US and Canadian Phase III ATX101 data
- ▶ H1:2014 – Potential ATX101 NDA filing in the US
- ▶ H2:2014 – Potential ATX101 European approval
- ▶ Q4:2014 or Q1:2015 – Potential ATX101 European launch
- ▶ Q4:2014-H1:2015 – Potential ATX101 FDA Approval
- ▶ 2015 – Potential ATX101 US Launch

### **Kythera's Valuation Rests Squarely On ATX101's Commercial Prospects, Which We Believe Are Significant**

Our consultant believes that if the European clinical results are replicated in the ongoing US and Canadian Phase III studies, that the outcome should be positive.

Given the robust clinical data package available, we believe that the ATX101 clinical program has been well vetted by the Street and that there is substantially less risk to the outcome of the



US and Canadian REFINE1/2 trials, which are due to read out soon. One of our consultants believes that the ATX101 data is some of the “most robust clinical data” he has seen for an aesthetic product, and we believe the Street fully expects a positive outcome with both of these trials given the strength of the pivotal European data, which resulted from similarly designed studies. Our consultant believes that if the European clinical results are replicated in the ongoing US and Canadian Phase III studies, that the outcome should be positive. However, a negative outcome in the REFINE1/2 trials would clearly be devastating for the company/valuation as the major opportunity for Kythera is the ability to market the drug in the US and Canadian territories. With that said, we reiterate our belief in the likely positive Phase III outcome – and the discussion will rapidly turn towards ATX101’s commercial prospects. Additionally, we believe that investors will need to quickly grasp the potential, as we believe that strategic buyers may begin to circle once the clinical results are in.

Our base case valuation model is predicated on ATX101 reaching \$500MM in U.S. sales or roughly 35-40% of the U.S. cosmetic/aesthetic neurotoxin market – and roughly 40-45% of the U.S. dermal filler market – within 5-6 years. Given our clinician commentary, we believe that is not only achievable, but potentially conservative. Our valuation work is also predicated on Kythera marketing this product on its own, which given the management team assembled, should be able to more than successfully execute. Under the base case models that we publish on the following pages, we believe that ATX101 can reach \$500MM in U.S. sales by 2020/2021 – and given its likely durability through its composition of matter patents into 2028 – our DCF value yields \$50 per share, which we believe is utilizing conservative ATX101 assumptions. However, we believe there is also the possibility that another dermatology/aesthetic player (such as Allergan, Valeant, Galderma) makes the wealth creating decision to acquire the company/product, which would relieve Kythera (and correspondingly our DCF) of significant SG&A spend given their already in-place salesforces. This would escalate our base case DCF value to \$70-75 per share. The bottom-line is that either standalone – or bought – we see tremendous potential upside for KYTH shares from these levels in the event of positive Phase III U.S. study results.

On the following pages we also publish our standalone best-case DCF scenario, which yields \$70 per share. Additionally, we publish our worst-case commercial scenario which yields \$18-20 per share. Interestingly, even in the worst-case commercial scenario we believe that to a strategic buyer that could eliminate a significant component of the spending would be willing to pay \$35-40 per share. The bottom-line is that if the outcome of the Phase III U.S. trials are positive – which we believe it will be – we see no reason why shares should not rapidly find the appropriate (higher) next level.



## Exhibit 1. Base-Case ATX101 U.S. Market Build – Given Consultant's Commentary Should Reach \$500MM By 2020/2021

ESTIMATED U.S. COSMETIC NEUROTOXIN TREATMENT MARKET											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Upper Face	Total WW Neurotoxin Sales (MM)	\$2,220	\$2,500	\$2,775	\$3,000	\$3,250	\$3,500	\$3,750	\$4,000	\$4,250	+11% - Allergan indicates the current WW market is \$2.5B
	Growth Rate	+13%	+13%	+11%	+9%	+8%	+7%	+7%	+6%	+6%	- Total WW Neurotoxin growth has been 12-14%
	Total U.S. Neurotoxin Sales (MM)	\$1,375	\$1,550	\$1,720	\$1,860	\$2,015	\$2,155	\$2,290	\$2,420	\$2,570	+10% - Est that U.S. contributes 60-65% of WW Neurotoxin
	Growth Rate	+11%	+13%	+9%	+8%	+8%	+7%	+6%	+6%	+6%	- Estimated that Therapeutic growth will be higher than cosmetic
	Est U.S. Cosmetic Use % of U.S. Neurotoxin	50%	50%	49%	49%	48%	48%	48%	48%	47%	- Est that roughly 50% of Neurotoxin use is Cosmetic
	Total U.S. Cosmetic Neurotoxin Sales	\$695	\$780	\$845	\$900	\$965	\$1,035	\$1,100	\$1,155	\$1,210	+8% - U.S. market has been relatively healthy
	Growth Rate	+10%	+12%	+8%	+7%	+7%	+7%	+6%	+5%	+5%	
	Boctox U.S. Cosmetic Share (AGN)	77%	75%	75%	74%	74%	74%	74%	74%	74%	-1% - Leading treatment - market creator
	Procedures (000)	1,189	1,300	1,400	1,489	1,589	1,711	1,811	1,900	2,000	- Procedure growth should continue to steadily grow
	Average Cost	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	- Pricing has remained stable
	Sales (\$MM)	\$535	\$585	\$630	\$670	\$715	\$770	\$815	\$855	\$900	+7%
	Dysport U.S. Cosmetic Share (VRX)	19%	19%	18%	18%	18%	18%	18%	18%	18%	-1% - Valeant has taken over marketing; second to market
	Procedures (000)	300	322	333	356	389	411	444	467	478	- Essentially undifferentiated product
	Average Cost	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	- Priced in-line with Botox
	Sales (\$MM)	\$135.0	\$145.0	\$150.0	\$160.0	\$175.0	\$185.0	\$200.0	\$210.0	\$215.0	+7%
Others/Xeomin Share	4%	6%	8%	8%	8%	8%	8%	8%	8%	+12% - Product was relaunched in January 2012	
Procedures (000)	63	125	163	175	188	200	213	225	238	- Essentially undifferentiated product; currently has 5%mar	
Average Cost	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	- Pricing has been more aggressive	
Sales (\$MM)	\$25.0	\$50.0	\$65.0	\$70.0	\$75.0	\$80.0	\$85.0	\$90.0	\$95.0	+20%	
Total Cosmetic Market Sales (MM)	\$695	\$780	\$845	\$900	\$965	\$1,035	\$1,100	\$1,155	\$1,210	+9% - Growth continuing to be relatively stable	
%Growth	+10%	+12%	+8%	+7%	+7%	+7%	+6%	+5%	+5%		
ESTIMATED U.S. DERMAL FILLER TREATMENT MARKET											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Middle Face	Total WW Dermal Filler Market (MM)	\$1,010	\$1,100	\$1,200	\$1,295	\$1,385	\$1,480	\$1,585	\$1,680	\$1,780	+8% - Allergan ests the WW Dermal Filler market is \$1.1B
	Growth Rate	+7%	+9%	+9%	+8%	+7%	+7%	+7%	+6%	+6%	- Total WW Dermal Filler growth has been 8-10% over the las
	Total Estimated U.S. Dermal Filler Sales	\$605	\$660	\$720	\$775	\$830	\$890	\$950	\$1,010	\$1,070	+8% - Est that U.S. is 60-65% of WW Dermal Fillers
Growth Rate	+7%	+9%	+9%	+8%	+7%	+7%	+7%	+6%	+6%	- Market appears to be growing at roughly 8-10% currently	
ESTIMATED U.S. SUBMENTAL FAT TREATMENT MARKET - KYTHERA's ATX-101 SHOULD REPRESENT THE MARKET FOR YEARS											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Lower Face (ATX-101)	Total Estimated WW Submental Fat Treatment Market (MM)			\$125	\$215	\$345	\$500	\$650	\$780		- Lower face should eventually equal Upper/ Mid-Face
	Growth Rate				+70%	+60%	+45%	+30%	+20%		- We would assume rapid growth
	Total Estimated U.S. Submental Fat Treatment Sales (MM)			\$80	\$140	\$225	\$325	\$425	\$505		- Est that U.S. will contribute 65% of WW ATX-101
	Growth Rate				+75%	+61%	+45%	+31%	+19%		- Market should exhibit rapid growth
	% of Estimated U.S. Cosmetic Neurotoxin			10%	15%	20%	30%	35%	40%		- Est to reach 40% of U.S. Neurotoxin market by 2020
	% of Estimated U.S. Dermal Filler Market			10%	15%	25%	35%	40%	45%		- Est to reach 45% of U.S. Dermal Filler market by 2019
	ATX-101 U.S. Submental Fat Share (KYTH)			100%	100%	100%	100%	100%	100%		- Should be alone in the market for many years
	Procedures/ Patients			32,000	56,000	90,000	108,333	141,667	168,333		- Procedure growth should grow rapidly
	Average Cost			\$2,500	\$2,500	\$2,500	\$3,000	\$3,000	\$3,000		- Premium pricing given the durability
	Sales (\$MM)			\$80	\$140	\$225	\$325	\$425	\$505		
	Total U.S. Submental Fat Market Sales (MM)			\$80	\$140	\$225	\$325	\$425	\$505		- Growth should be rapid given likely patient acceptance
	%Growth				+75%	+61%	+44%	+31%	+19%		

Source: Cowen and Company; Allergan Quarterly Reports

## Exhibit 2. Base Case International Sales Build And Contribution Assuming High Teens Royalty

ESTIMATED INTERNATIONAL SUBMENTAL FAT TREATMENT MARKET - ROYALTY ON BAYER SALES											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Lower Face (ATX-101)	Total Est WW Submental Fat Treatment Market (MM)			\$125	\$215	\$345	\$500	\$650	\$780		- Lower face should garner equal share of Upper/ Mid-Face
	Growth Rate				+70%	+60%	+45%	+30%	+20%		- We would assume rapid growth
	Total Est U.S. Submental Fat Treatment Sales (MM)			\$80	\$140	\$225	\$325	\$425	\$505		- Est that U.S. will contribute 65% of WW ATX-101
	Growth Rate				+75%	+61%	+45%	+31%	+19%		- Market should exhibit rapid growth
	ATX-101 Submental International Sales (Bayer)			\$45	\$75	\$120	\$175	\$225	\$275		- Difference between WW and U.S. expectations
	Likely Royalty (Undisclosed, But Estimated At 15-20%)			18%	18%	18%	18%	18%	18%		- Undisclosed but likely between 15-20%
	Sales (\$MM)			\$10.0	\$15.0	\$20.0	\$30.0	\$40.0	\$50.0		

Source: Cowen and Company



Exhibit 3. DCF Under Base Case Scenario Yields \$50 Per Share

Assumptions:		Output:																		
Increase in WC	5.0%	Equity Value	\$1,042.8																	
Discount Rate	10.0%	Estimated Share Price	\$50.00																	
Shares Outstanding	21.0	Debt	\$0.0																	
		Cash	\$50.0																	
		Enterprise Value	\$992.8																	
	Wacc:	10.0%																		
Kythera DCF																				
	2011P	2012P	2013P	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P
Total Revenues	\$13.0	\$19.7	\$20.0	\$40.0	\$130.0	\$195.0	\$285.0	\$395.0	\$505.0	\$595.0	\$635.0	\$700.0	\$765.0	\$825.0	\$885.0	\$945.0	\$1,000.0	\$1,060.0	\$700.0	\$395.0
%Change	+189%	+52%	+2%	+100%	+225%	+50%	+46%	+39%	+28%	+18%	+7%	+10%	+9%	+8%	+7%	+7%	+6%	+6%	-34%	-44%
Cost of Goods	(\$4.8)	\$1.7	\$2.0	\$4.0	\$19.5	\$29.3	\$42.8	\$59.3	\$75.8	\$89.3	\$95.3	\$105.0	\$114.8	\$123.8	\$132.8	\$141.8	\$150.0	\$159.0	\$105.0	\$59.3
Gross Profit	\$17.8	\$18.0	\$18.0	\$36.0	\$110.5	\$165.8	\$242.3	\$335.8	\$429.3	\$505.8	\$539.8	\$595.0	\$650.3	\$701.3	\$752.3	\$803.3	\$850.0	\$901.0	\$595.0	\$335.8
Gross Margin - Total	136.7%	91.4%	90.0%	90.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
SG&A	\$10.5	\$14.0	\$14.0	\$45.0	\$80.0	\$100.0	\$120.0	\$140.0	\$160.0	\$180.0	\$200.0	\$220.0	\$235.0	\$250.0	\$265.0	\$280.0	\$290.0	\$300.0	\$155.0	\$125.0
%of Revs	80.9%	71.1%	70.0%	112.5%	61.5%	51.3%	42.1%	35.4%	31.7%	30.3%	31.5%	31.4%	30.7%	30.3%	29.9%	29.6%	29.0%	28.3%	22.1%	31.6%
R&D	\$43.2	\$50.0	\$50.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$30.0	\$30.0	\$20.0	\$10.0
%of Revs	332.6%	254.0%	250.0%	112.5%	34.6%	23.1%	15.8%	11.4%	8.9%	7.6%	7.1%	6.4%	5.9%	5.5%	5.1%	4.8%	3.0%	2.8%	2.9%	2.5%
Operating Expenses	\$53.7	\$64.0	\$64.0	\$90.0	\$125.0	\$145.0	\$165.0	\$185.0	\$205.0	\$225.0	\$245.0	\$265.0	\$280.0	\$295.0	\$310.0	\$325.0	\$320.0	\$330.0	\$175.0	\$135.0
%of Revenues	413.5%	325.1%	320.0%	225.0%	96.2%	74.4%	57.9%	46.8%	40.6%	37.8%	38.6%	37.9%	36.6%	35.8%	35.0%	34.4%	32.0%	31.1%	25.0%	34.2%
Operating Income	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	(\$14.5)	\$20.8	\$77.3	\$150.8	\$224.3	\$280.8	\$294.8	\$330.0	\$370.3	\$406.3	\$442.3	\$478.3	\$530.0	\$571.0	\$420.0	\$200.8
%Operating Margin	NM	NM	NM	NM	-11.2%	10.6%	27.1%	38.2%	44.4%	47.2%	46.4%	47.1%	48.4%	49.2%	50.0%	50.6%	53.0%	53.9%	60.0%	50.8%
Other 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
Adjusted EBIT	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	(\$14.5)	\$20.8	\$77.3	\$150.8	\$224.3	\$280.8	\$294.8	\$330.0	\$370.3	\$406.3	\$442.3	\$478.3	\$530.0	\$571.0	\$420.0	\$200.8
%of Revs	NM	NM	NM	NM	-11.2%	10.6%	27.1%	38.2%	44.4%	47.2%	46.4%	47.1%	48.4%	49.2%	50.0%	50.6%	53.0%	53.9%	60.0%	50.8%
Taxes					\$7.3	\$27.0	\$52.8	\$78.5	\$98.3	\$103.2	\$115.5	\$129.6	\$142.2	\$154.8	\$167.4	\$185.5	\$199.9	\$147.0	\$70.3	
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%	35.0%	35.0%	35.0%
NOPAT	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	(\$14.5)	\$13.5	\$50.2	\$98.0	\$145.8	\$182.5	\$191.6	\$214.5	\$240.7	\$264.1	\$287.5	\$310.9	\$344.5	\$371.2	\$273.0	\$130.5
Adjustments:																				Terminal
Capex	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)
Depreciation & Amortization	\$25.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
Change In Working Capital	(\$10.0)	(\$10.5)	(\$11.0)	(\$11.6)	(\$12.2)	(\$12.8)	(\$13.4)	(\$14.1)	(\$14.8)	(\$15.5)	(\$16.3)	(\$17.1)	(\$18.0)	(\$18.9)	(\$19.8)	(\$20.8)	(\$21.8)	(\$22.9)	(\$24.1)	(\$25.3)
Free Cash Flow	(\$30.9)	(\$51.5)	(\$52.0)	(\$60.6)	(\$21.7)	\$5.7	\$41.8	\$88.9	\$136.0	\$172.0	\$180.3	\$202.4	\$227.7	\$250.2	\$272.7	\$295.1	\$327.7	\$353.2	\$253.9	\$110.2
																				\$1,102.2

Source: Cowen and Company



#### Exhibit 4. DCF Under Base Case Scenario Value To Strategic Buyer That Could Reduce Sales Spending Yields \$70-75

Assumptions:	Output:																			
Increase in WC	5.0%	Equity Value \$1,565.1																		
Discount Rate	10.0%	Estimated Share Price \$75.00																		
Shares Outstanding	21.0	Debt \$0.0																		
		Cash \$50.0																		
		Enterprise Value \$1,515.1																		
Wacc:		10.0%																		
Kythera DCF																				
	2011P	2012P	2013P	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P
Total Revenues	\$13.0	\$19.7	\$20.0	\$40.0	\$130.0	\$195.0	\$285.0	\$395.0	\$505.0	\$595.0	\$635.0	\$700.0	\$765.0	\$825.0	\$885.0	\$945.0	\$1,000.0	\$1,060.0	\$700.0	\$395.0
%Change	+189%	+52%	+2%	+100%	+225%	+50%	+46%	+39%	+28%	+18%	+7%	+10%	+9%	+8%	+7%	+7%	+6%	+6%	-34%	-44%
Cost of Goods	(\$4.8)	\$1.7	\$2.0	\$4.0	\$19.5	\$29.3	\$42.8	\$59.3	\$75.8	\$89.3	\$95.3	\$105.0	\$114.8	\$123.8	\$132.8	\$141.8	\$150.0	\$159.0	\$105.0	\$59.3
Gross Profit	\$17.8	\$18.0	\$18.0	\$36.0	\$110.5	\$165.8	\$242.3	\$335.8	\$429.3	\$505.8	\$539.8	\$595.0	\$650.3	\$701.3	\$752.3	\$803.3	\$850.0	\$901.0	\$595.0	\$335.8
Gross Margin - Total	136.7%	91.4%	90.0%	90.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
SG&A	\$10.5	\$14.0	\$14.0	\$45.0	\$50.0	\$60.0	\$70.0	\$80.0	\$90.0	\$90.0	\$90.0	\$90.0	\$90.0	\$90.0	\$90.0	\$90.0	\$90.0	\$50.0	\$30.0	\$30.0
%of Revs	80.9%	71.1%	70.0%	112.5%	38.5%	30.8%	24.6%	20.3%	17.8%	15.1%	14.2%	12.9%	11.8%	10.9%	10.2%	9.5%	9.0%	4.7%	4.3%	7.6%
R&D	\$43.2	\$50.0	\$50.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$30.0	\$30.0	\$20.0	\$10.0
%of Revs	332.6%	254.0%	250.0%	112.5%	34.6%	23.1%	15.8%	11.4%	8.9%	7.6%	7.1%	6.4%	5.9%	5.5%	5.1%	4.8%	3.0%	2.8%	2.9%	2.5%
Operating Expenses	\$53.7	\$64.0	\$64.0	\$90.0	\$95.0	\$105.0	\$115.0	\$125.0	\$135.0	\$135.0	\$135.0	\$135.0	\$135.0	\$135.0	\$135.0	\$135.0	\$120.0	\$80.0	\$50.0	\$40.0
%of Revenues	413.5%	325.1%	320.0%	225.0%	73.1%	53.8%	40.4%	31.6%	26.7%	22.7%	21.3%	19.3%	17.6%	16.4%	15.3%	14.3%	12.0%	7.5%	7.1%	10.1%
Operating Income	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	\$15.5	\$60.8	\$127.3	\$210.8	\$294.3	\$370.8	\$404.8	\$460.0	\$515.3	\$566.3	\$617.3	\$668.3	\$730.0	\$821.0	\$545.0	\$295.8
%Operating Margin	NM	NM	NM	NM	11.9%	31.2%	44.6%	53.4%	58.3%	62.3%	63.7%	65.7%	67.4%	68.6%	69.7%	70.7%	73.0%	77.5%	77.9%	74.9%
Other 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
Adjusted EBIT	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	\$15.5	\$60.8	\$127.3	\$210.8	\$294.3	\$370.8	\$404.8	\$460.0	\$515.3	\$566.3	\$617.3	\$668.3	\$730.0	\$821.0	\$545.0	\$295.8
%of Revs	NM	NM	NM	NM	11.9%	31.2%	44.6%	53.4%	58.3%	62.3%	63.7%	65.7%	67.4%	68.6%	69.7%	70.7%	73.0%	77.5%	77.9%	74.9%
Taxes						\$21.3	\$44.5	\$73.8	\$103.0	\$129.8	\$141.7	\$161.0	\$180.3	\$198.2	\$216.0	\$233.9	\$255.5	\$287.4	\$190.8	\$103.5
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%	35.0%	35.0%
NOPAT	(\$35.9)	(\$46.0)	(\$46.0)	(\$54.0)	\$15.5	\$39.5	\$82.7	\$137.0	\$191.3	\$241.0	\$263.1	\$299.0	\$334.9	\$368.1	\$401.2	\$434.4	\$474.5	\$533.7	\$354.3	\$192.2
Adjustments:																				
Capex	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)
Depreciation & Amortization	\$25.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
Change In Working Capital	(\$10.0)	(\$10.5)	(\$11.0)	(\$11.6)	(\$12.2)	(\$12.8)	(\$13.4)	(\$14.1)	(\$14.8)	(\$15.5)	(\$16.3)	(\$17.1)	(\$18.0)	(\$18.9)	(\$19.8)	(\$20.8)	(\$21.8)	(\$22.9)	(\$24.1)	(\$25.3)
Free Cash Flow	(\$30.9)	(\$51.5)	(\$52.0)	(\$60.6)	\$8.3	\$31.7	\$74.3	\$127.9	\$181.5	\$230.5	\$251.8	\$286.9	\$322.0	\$354.2	\$386.4	\$418.6	\$457.7	\$515.7	\$335.2	\$1719.7

Source: Cowen and Company

#### Exhibit 5. DCF Under Best Case Scenario Standalone Yields \$70

Assumptions:		Output:																		
Increase in WC	5.0%	Equity Value	\$1,480.4																	
Discount Rate	10.0%	Estimated Share Price	\$70.00																	
Shares Outstanding	21.0	Debt	\$0.0																	
		Cash	\$0.0																	
		Enterprise Value	\$1,480.4																	
Wacc:		10.0%																		
Kythera DCF																				
	2011P	2012P	2013P	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P
Total Revenues	\$13.0	\$19.7	\$0.0	\$40.0	\$165.0	\$250.0	\$360.0	\$490.0	\$625.0	\$740.0	\$800.0	\$880.0	\$960.0	\$1,035.0	\$1,105.0	\$1,180.0	\$1,250.0	\$1,325.0	\$865.0	\$485.0
%Change	+189%	+52%	-100%	#DIV/0!	+313%	+52%	+44%	+36%	+28%	+18%	+8%	+10%	+9%	+8%	+7%	+7%	+6%	+6%	-35%	-44%
Cost of Goods	(\$4.8)	\$1.7	\$0.0	\$4.0	\$24.8	\$37.5	\$54.0	\$73.5	\$93.8	\$111.0	\$120.0	\$132.0	\$144.0	\$155.3	\$165.8	\$177.0	\$187.5	\$198.8	\$129.8	\$72.8
Gross Profit	\$17.8	\$0.0	\$0.0	\$36.0	\$140.3	\$212.5	\$306.0	\$416.5	\$531.3	\$629.0	\$680.0	\$748.0	\$816.0	\$879.8	\$939.3	\$1,003.0	\$1,062.5	\$1,126.3	\$735.3	\$412.3
Gross Margin - Total	136.7%	0.0%	#DIV/0!	90.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
SG&A	\$10.5	\$16.0	\$16.0	\$45.0	\$80.0	\$100.0	\$120.0	\$140.0	\$160.0	\$180.0	\$200.0	\$220.0	\$235.0	\$250.0	\$265.0	\$280.0	\$290.0	\$300.0	\$220.0	\$165.0
%of Revs	80.9%	81.3%	#DIV/0!	112.5%	48.5%	40.0%	33.3%	28.6%	25.6%	24.3%	25.0%	25.0%	24.5%	24.2%	24.0%	23.7%	23.2%	22.6%	25.4%	34.0%
R&D	\$43.2	\$35.0	\$35.0	\$35.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$30.0	\$30.0	\$30.0	\$30.0
%of Revs	332.6%	177.8%	#DIV/0!	87.5%	27.3%	18.0%	12.5%	9.2%	7.2%	6.1%	5.6%	5.1%	4.7%	4.3%	4.1%	3.8%	2.4%	2.3%	3.5%	6.2%
Operating Expenses	\$53.7	\$51.0	\$51.0	\$80.0	\$125.0	\$145.0	\$165.0	\$185.0	\$205.0	\$225.0	\$245.0	\$265.0	\$280.0	\$295.0	\$310.0	\$325.0	\$320.0	\$330.0	\$250.0	\$195.0
%of Revenues	413.5%	259.1%	#DIV/0!	200.0%	75.8%	58.0%	45.8%	37.8%	32.8%	30.4%	30.6%	30.1%	29.2%	28.5%	28.1%	27.5%	25.6%	24.9%	28.9%	40.2%
Operating Income	(\$35.9)	(\$51.0)	(\$51.0)	(\$44.0)	\$15.3	\$67.5	\$141.0	\$231.5	\$326.3	\$404.0	\$435.0	\$483.0	\$536.0	\$584.8	\$629.3	\$678.0	\$742.5	\$796.3	\$485.3	\$217.3
%Operating Margin	NM	NM	NM	NM	9.2%	27.0%	39.2%	47.2%	52.2%	54.6%	54.4%	54.9%	55.8%	56.5%	56.9%	57.5%	59.4%	60.1%	56.1%	44.8%
Other Income	0.0	(0.1)	(0.1)	0.0	0.3	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	(\$35.9)	(\$51.1)	(\$51.1)	(\$44.0)	\$15.6	\$67.5	\$141.0	\$231.5	\$326.3	\$404.0	\$435.0	\$483.0	\$536.0	\$584.8	\$629.3	\$678.0	\$742.5	\$796.3	\$485.3	\$217.3
%of Revs	NM	NM	NM	NM	9.4%	27.0%	39.2%	47.2%	52.2%	54.6%	54.4%	54.9%	55.8%	56.5%	56.9%	57.5%	59.4%	60.1%	56.1%	44.8%
Taxes					\$0.0	\$23.6	\$49.4	\$81.0	\$114.2	\$141.4	\$152.3	\$169.1	\$187.6	\$204.7	\$220.2	\$237.3	\$259.9	\$278.7	\$169.8	\$76.0
Income Tax Rate					0.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
NOPAT	(\$35.9)	(\$51.1)	(\$51.1)	(\$44.0)	\$15.6	\$43.9	\$91.7	\$150.5	\$212.1	\$262.6	\$282.8	\$314.0	\$348.4	\$380.1	\$409.0	\$440.7	\$482.6	\$517.6	\$315.4	\$141.2
Adjustments:																				
Capex	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)
Depreciation & Amortization	\$25.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
Change In Working Capital	(\$10.0)	(\$10.5)	(\$11.0)	(\$11.6)	(\$12.2)	(\$12.8)	(\$13.4)	(\$14.1)	(\$14.8)	(\$15.5)	(\$16.3)	(\$17.1)	(\$18.0)	(\$18.9)	(\$19.8)	(\$20.8)	(\$21.8)	(\$22.9)	(\$24.1)	(\$25.3)
Free Cash Flow	(\$30.9)	(\$56.6)	(\$57.1)	(\$50.6)	\$8.4	\$36.1	\$83.2	\$141.4	\$202.3	\$252.1	\$271.5	\$301.8	\$335.4	\$366.2	\$394.2	\$424.9	\$465.8	\$499.6	\$296.3	\$1,209.4

Source: Cowen and Company





## Exhibit 6. DCF Under Worst Case Scenario Standalone Yields \$18-20

Assumptions:		Output:																		
Increase in WC	5.0%	Equity Value	\$386.9																	
Discount Rate	10.0%	Estimated Share Price	\$18.00																	
Shares Outstanding	21.0	Debt	\$0.0																	
		Cash	\$0.0																	
		Enterprise Value	\$386.9																	
Wacc:		10.0%																		
Kythera DCF																				
	2011P	2012P	2013P	2014P	2015P	2016P	2017P	2018P	2019P	2020P	2021P	2022P	2023P	2024P	2025P	2026P	2027P	2028P	2029P	2030P
Total Revenues	\$13.0	\$19.7	\$0.0	\$40.0	\$95.0	\$130.0	\$175.0	\$235.0	\$295.0	\$345.0	\$350.0	\$385.0	\$420.0	\$455.0	\$490.0	\$525.0	\$560.0	\$595.0	\$415.0	\$240.0
%Change	+189%	+52%	-100%	#DIV/0!	+138%	+37%	+35%	+34%	+26%	+17%	+1%	+10%	+9%	+8%	+8%	+7%	+7%	+6%	-30%	-42%
Cost of Goods	(\$4.8)	\$19.7	\$0.0	\$4.0	\$14.3	\$19.5	\$26.3	\$35.3	\$44.3	\$51.8	\$52.5	\$57.8	\$63.0	\$68.3	\$73.5	\$78.8	\$84.0	\$89.3	\$62.3	\$36.0
Gross Profit	\$17.8	\$0.0	\$0.0	\$36.0	\$80.8	\$110.5	\$148.8	\$199.8	\$250.8	\$293.3	\$297.5	\$327.3	\$357.0	\$386.8	\$416.5	\$446.3	\$476.0	\$505.8	\$352.8	\$204.0
Gross Margin - Total	136.7%	0.0%	#DIV/0!	90.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
SG&A	\$10.5	\$16.0	\$16.0	\$45.0	\$70.0	\$85.0	\$95.0	\$105.0	\$110.0	\$120.0	\$130.0	\$140.0	\$150.0	\$160.0	\$170.0	\$180.0	\$190.0	\$200.0	\$100.0	\$85.0
%of Revs	80.9%	81.3%	#DIV/0!	112.5%	73.7%	65.4%	54.3%	44.7%	37.3%	34.8%	37.1%	36.4%	35.7%	35.2%	34.7%	34.3%	33.9%	33.6%	24.1%	35.4%
R&D	\$43.2	\$35.0	\$35.0	\$35.0	\$45.0	\$45.0	\$40.0	\$40.0	\$30.0	\$30.0	\$30.0	\$25.0	\$25.0	\$25.0	\$25.0	\$20.0	\$20.0	\$20.0	\$20.0	\$10.0
%of Revs	332.6%	177.8%	#DIV/0!	87.5%	47.4%	34.6%	22.9%	17.0%	10.2%	8.7%	8.6%	6.5%	6.0%	5.5%	5.1%	3.8%	3.6%	3.4%	4.8%	4.2%
Operating Expenses	\$53.7	\$51.0	\$51.0	\$80.0	\$115.0	\$130.0	\$135.0	\$145.0	\$140.0	\$150.0	\$160.0	\$165.0	\$175.0	\$185.0	\$195.0	\$200.0	\$210.0	\$220.0	\$120.0	\$95.0
%of Revenues	413.5%	259.1%	#DIV/0!	200.0%	121.1%	100.0%	77.1%	61.7%	47.5%	43.5%	45.7%	42.9%	41.7%	40.7%	39.8%	38.1%	37.5%	37.0%	28.9%	39.6%
Operating Income	(\$35.9)	(\$51.0)	(\$51.0)	(\$44.0)	(\$34.3)	(\$19.5)	\$13.8	\$54.8	\$110.8	\$143.3	\$137.5	\$162.3	\$182.0	\$201.8	\$221.5	\$246.3	\$266.0	\$285.8	\$232.8	\$109.0
%Operating Margin	NM	NM	NM	NM	-36.1%	-15.0%	7.9%	23.3%	37.5%	41.5%	39.3%	42.1%	43.3%	44.3%	45.2%	46.9%	47.5%	48.0%	56.1%	45.4%
Other Income	0.0	(0.1)	(0.1)	0.0	0.3	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	(\$35.9)	(\$51.1)	(\$51.1)	(\$44.0)	(\$34.0)	(\$19.5)	\$13.8	\$54.8	\$110.8	\$143.3	\$137.5	\$162.3	\$182.0	\$201.8	\$221.5	\$246.3	\$266.0	\$285.8	\$232.8	\$109.0
%of Revs	NM	NM	NM	NM	-35.7%	-15.0%	7.9%	23.3%	37.5%	41.5%	39.3%	42.1%	43.3%	44.3%	45.2%	46.9%	47.5%	48.0%	56.1%	45.4%
Taxes										\$50.1	\$48.1	\$56.8	\$63.7	\$70.6	\$77.5	\$86.2	\$93.1	\$100.0	\$81.5	\$38.2
Income Tax Rate								NOLs	NOLs	NOLs	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%	35.0%
NOPAT	(\$35.9)	(\$51.1)	(\$51.1)	(\$44.0)	(\$34.0)	(\$19.5)	\$13.8	\$54.8	\$110.8	\$93.1	\$89.4	\$105.5	\$118.3	\$131.1	\$144.0	\$160.1	\$172.9	\$185.7	\$151.3	\$70.9
Adjustments:																				Terminal
Capex	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)	(\$10.0)
Depreciation & Amortization	\$25.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0
Change In Working Capital	(\$10.0)	(\$10.5)	(\$11.0)	(\$11.6)	(\$12.2)	(\$12.8)	(\$13.4)	(\$14.1)	(\$14.8)	(\$15.5)	(\$16.3)	(\$17.1)	(\$18.0)	(\$18.9)	(\$19.8)	(\$20.8)	(\$21.8)	(\$22.9)	(\$24.1)	(\$25.3)
Free Cash Flow	(\$30.9)	(\$56.6)	(\$57.1)	(\$50.6)	(\$41.1)	(\$27.3)	\$5.3	\$45.7	\$101.0	\$82.6	\$78.1	\$93.4	\$105.3	\$117.3	\$129.2	\$144.3	\$156.1	\$167.8	\$132.2	\$505.8

Source: Cowen and Company

## Kythera Overview – Gearing Up To Become A Major Player In Aesthetics

With the anticipated foundation of ATX101 for the reduction of submental (chin) fat, Kythera could become one of the leading aesthetics companies focused on high value, self-pay aesthetic products. ATX101 is currently in Phase III development with data from U.S. and Canadian pivotal studies expected to read out shortly. If successful, we believe the Company could then submit an ATX101 NDA to the FDA by year-end 2013 or sometime during the first half of 2014 and launch the product in the U.S. during H1:2015.

Kythera has a solid management team, with most individuals having significant levels of development, regulatory and commercial experience from Amgen or Allergan, which we believe should help de-risk the story. Specifically, we expect management's operational expertise from Amgen – and dermatology and cosmetic development/commercial expertise from Allergan – to transfer to Kythera and give investors confidence in their ability to operate a company that may soon enter the commercial stage. As of June 30, 2013, the Company had roughly \$75MM in cash, which it expects should be sufficient to fund operations for at least another 12 months. Using the second quarter 2013 cash burn of \$12MM, which results in an annual cash burn run-rate of roughly \$50MM, this could be conservative – but given the need to increase spend into the commercial launch – we would anticipate promotional efforts/investment to ramp considerably beginning in H2:2014. To date, the Company has also drawn \$15MM from a credit facility to support ATX101 development. In addition to the





Company's existing cash, Kythera is eligible to receive an additional \$297MM in regulatory and commercial milestones from development and commercial partner Bayer in the international markets. The next regulatory milestone of \$40MM that will be owed to Kythera from Bayer will be triggered by the first major EU country approval, which includes the UK, Germany, Spain, France, or Italy. Based upon Bayer's intent to file an MAA by year-end 2013, this milestone payment could be received by Kythera during the second half of 2014. The Company stands to receive mid to high teen royalties on net sales from Bayer outside of the U.S. and Canada (which we estimate at roughly 15-20%), which could begin as early as late 2014/early 2015 upon ATX101 approval in Europe. Kythera will also be obligated to pay low to mid-single digit royalties on net product sales of ATX101 to LA Biomed, from whom the worldwide exclusive license for ATX101 was obtained.

### **ATX101 To Become The First Non-Surgical Injectable Product For The Reduction Of Submental "Chin" Fat**

Our consultants believe that virtually all of the patients eligible for surgery will be good candidates for ATX101 treatment. In fact, our consultants believe that most of the time, they would recommend ATX101 treatment before the patient undergoes surgery.

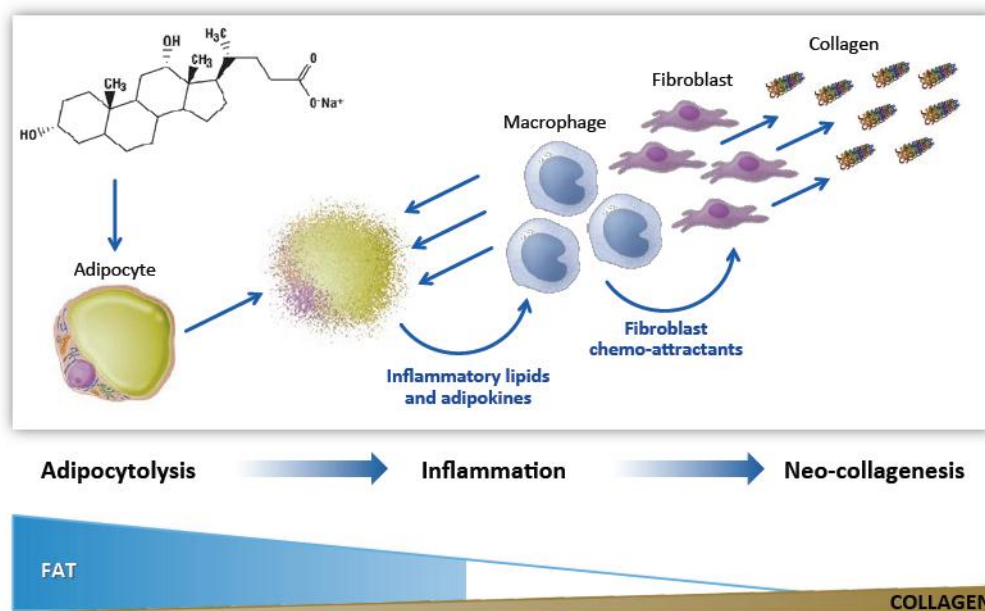
Kythera's ATX101, which is a proprietary synthetic formulation of sodium deoxycholate, has the potential to become the first FDA-approved drug for the reduction of submental fat, or "double chin." To date, ATX101 has demonstrated meaningful reductions in submental fat in clinical studies, which correspond to patient satisfaction measures and therefore, improvement in perceived chin appearance. Currently, there are no FDA-approved non-surgical treatments available for the reduction of submental fat. While surgical procedures can be effective, they often involve significant pain, down/recovery time, expense, and risks associated with surgery. Submental liposuction often involves wearing a wrap or sling for up to two weeks post-surgery to promote readherence of the skin. Furthermore, a significant amount of patients (i.e. people on blood thinners or elderly people) may not be candidates for surgery, leaving them with no options, and our consultants believe this population will be excellent candidates for ATX101 therapy. We believe that ATX101 should be able to overcome many of the hurdles associated with current, invasive treatments for submental fat. Furthermore, our consultants also believe that virtually all of the patients eligible for surgery will be good candidates for ATX101 treatment. In fact, our consultants believe that most of the time, they would recommend ATX101 treatment before the patient undergoes surgery.

**ATX101's Mechanism Leads To Fat Cell Breakdown And Production Of Collagen, Which Helps Sustain A Long-Term Clinical Effect.** Sodium deoxycholate, the active ingredient in ATX101, is a naturally occurring bile salt and well-characterized compound that exists naturally in our bodies and is used to break down fat in our digestive tract. Post injection into subcutaneous fat, sodium deoxycholate disrupts the cell membrane of adipocytes (fat cells) thereby promoting the breakdown of dietary fat by disrupting the phospholipid bilayer of adipocytes causing adipocytolysis, or fat cell lysis (bursting of the cell membrane, or death). Albumin and other proteins then bind to ATX101 and attenuate its activity. This attenuation results in preferential destruction of adipocytes as opposed to protein-rich tissues such as skin, muscle, and blood vessels. The then protein-bound ATX101 enters the circulatory system to be eliminated with the naturally occurring bile pool. The presence of cell debris activates an inflammatory response and macrophages migrate to the treated area over the next 3-4 weeks. Eventually, macrophages will surround and engulf the cell debris and triglycerides, which are



cleared through natural metabolic processes. This results in reduction of subcutaneous fat in the treated area and thickening of fibrous material. The production of fibrous material such as collagen via neocollagenesis is thought to be a result of fibroblasts, which are attracted to the area due to cytokine secretion by macrophages. We believe the production of collagen here is an important aspect to the mechanism in addition to the destruction of fat cells, because it helps maintain the integrity of the tightened under chin area after the subcutaneous fat is reduced/removed. The measure of loose or tight skin can be referred to as skin laxity.

#### Exhibit 7. ATX101 Works By Preferentially Targeting Fat Cells, Causing Adipocytolysis



Source: Cowen and Company; Kythera Investor Presentation

**ATX101 Treatment Experience Should Not Be Compared To Older, Unregulated Mesotherapy Treatments.** The concept of mesotherapy as a non-surgical cosmetic injectable treatment to reduce subcutaneous fat has been around since the late 1980s when it was introduced by an Italian physician, Sergio Maggiori. Since then, significant use of these products has been observed in Europe and the U.S. These products are not FDA approved and are produced by compounding pharmacies, which have been under intense scrutiny recently as several deaths have been observed as a result of fungal infections that were acquired from steroid injections made by these pharmacies. Additionally, these products are typically not administered by a licensed and trained dermatologist or plastic surgeon and instead the procedures are being performed at medispas, “cosmetic” surgeon offices, or by non-care doctors. Lipostabil and Lipo-dissolve are two such products that have been used for mesotherapy and the American Society of Non-surgical Aesthetics estimates that up to 100,000 Lipo-dissolve procedures have been performed in the U.S. and Europe. There have been reports of serious adverse events as a result of these treatments, however we do not believe that ATX101 treatment for submental fat will, or has, resulted in a similar adverse event profile.



Our consultants note that due to the lack of FDA approval, associated government regulation, and adequate clinical studies, these treatments are often injected with concentrations of sodium deoxycholate or volumes that are 4-5 times greater than ATX101, which has resulted in serious adverse events such as necrosis. These treatments often contain phosphatidylcholine as well, which is not included in the ATX101 formulation. One of our consultants who has performed hundreds of ATX101 treatments, mentioned that he has not seen even one event of necrosis in his experience. Ultimately, we – and our consultants – do not believe that ATX101 treatment will result in the same adverse event profile and horror stories heard with these older, unregulated mesotherapy treatments, but we do believe that it will be important for Kythera to make a clear distinction between the two when educating patients and physicians.

### **The Story Will Quickly Turn To The Commercial Opportunity After Phase III US/Canadian Data Read Out – Lower Face (ATX101) Opportunity Should Enjoy Synergies From Mid and Upper-Face Injectables**

We – and our consultants – believe that the product, if successfully developed and approved, has exceedingly attractive potential, with our estimates of sales exceeding \$500MM+ in the US and a similar market – albeit slightly smaller – in Europe

Interestingly, up to 25% of patients in the ATX101 European studies were male and our physician consultants indicated that this is one of the more popular procedures for men, which suggest that uptake in men could be greater than the <10% observed with toxins and fillers.

One consultant states that significant off-label use will happen from day 1 and possible areas he would target are “love handles,” lipomas, stomach “pooches,” and “bra fat.”

We – and our consultants – believe that the product, if successfully developed and approved, has exceedingly attractive potential, with our estimates of sales exceeding \$500MM+ in the US and a similar market – albeit slightly smaller – in Europe. Over the past decade, facial injectables have become increasingly more common and the market is still expected to more than double by 2018. In 2012, there were almost 6MM procedures performed (4MM for toxins and 1.7MM for fillers) for frown lines, wrinkles, smile lines, and volume loss, yet the neck area remains underserved. The American Society of Aesthetic Plastic Surgery (ASAPS) has reported that younger patients are increasingly opting for facial injectable treatments to delay the appearance of lines and wrinkles, and we believe this will carry over into similar treatments like to ATX101. Additionally, older men are increasingly looking to delay the signs of aging and are seeking facial injectable treatments. Traditionally, the market has been dominated by females and in this particular segment of facial injectables (in the chin), we believe there might even be a larger opportunity in men than there is with other injectable treatments. Interestingly, up to 25% of patients in the ATX101 European studies were male and our physician consultants indicated that this is one of the more popular procedures for men, which suggest that uptake in men could be greater than the <10% observed with toxins and fillers.

Assuming Kythera receives ATX101 approval for submental fat, we would then expect the Company to pursue other indications around the body that include small, localized fat deposits with high aesthetic value. These additional indications could bring the product closer to a \$750-1,000MM cosmetic market opportunity, similar to the Botox cosmetic franchise. And even without approvals in other indications, upon ATX101 approval for submental fat, we do expect there to be a significant amount of off-label use in other areas as dermatologists/plastic surgeons are notorious for using products off-label. One consultant states that significant off-label use will happen from day 1 and possible areas he would target are “love handles,” lipomas, stomach “pooches,” and “bra fat.”

**900,000 Existing Injectable Patients Are The Low-Hanging Fruit.** The largest market opportunity will be in existing patients – primarily women that make up 90% of injectable users



– that are currently receiving facial injectable treatments such as Botox, Restylane, and Juvederm, with the potential for market expansion into patients naïve to facial injectable treatments. For existing toxin and filler users, which were estimated at 2MM+ in 2012, approximately 75% (1.5MM) have treatable submental fat. Of those patients, the Company believes that 900,000 (~60%) are likely to try ATX101. Currently, the new toxin/filler user population in the US has a 12% CAGR suggesting that the adoption of these procedures is still at a high rate. Europe is exhibiting a similar growth rate for this class of products. For naïve users ages 20-65 with a household income of \$50,000+ (est. 116MM), an estimated 28MM are considered aesthetic injectable “considerers” and 23MM of those people are considered to have treatable submental fat. To put our \$500MM target into perspective, it would require roughly 200,000 annual users (at roughly \$2,500-3,000 per treatment), or roughly 20-25% of the current existing injectable patients, which we believe is more than reasonable.

ATX101 is injected subcutaneously into the target fat via several microinjections and is supposed to provide for local fat reduction while leaving the surrounding tissue unaffected. The in-office procedure would be primarily performed by dermatologists and plastic surgeons and last approximately 15-20 minutes with minimal to no patient down time.

**The ATX101 Procedure Is Similar To Botox And Will Be Easy To Learn.** In general, the ATX101 procedure will be most similar to the procedure currently performed with Botox, which requires an even distribution of the drug product, as opposed to fillers, which require more finesse by the physician. ATX101 is injected subcutaneously into the target fat via several microinjections and is supposed to provide for local fat reduction while leaving the surrounding tissue unaffected. The in-office procedure would be primarily performed by dermatologists and plastic surgeons and last approximately 15-20 minutes with minimal to no patient down time. The Company believes that 3-6 treatment visits would be required to achieve optimal results and that this effect would be sustained as greater than 90% of ATX101 patients in a long-term Phase II follow up study maintained the aesthetic correction after 2 years.

We believe that ATX101 will employ a 30-gauge needle, which is the same size as used with the Botox product. In fact, a smaller 32-gauge needle may even be possible as well. However, we do not see this as a barrier as the vast majority of patients are unaffected by Botox injections and the size of the needle. Approximately 0.2cc of ATX101 per cm<sup>2</sup> will be injected into the patient over a grid. Several syringes may be required for treatment and while the number of injections will be variable depending upon the size of the patient’s neck, we estimate that number of injections will be around 20-30 per patient. Like Botox, ATX101 will not require refrigeration, which will make it even easier for a physician’s office to carry it.

**ATX101 Treatment Cost Expected To Be Priced Less Than Invasive Surgical Alternatives.** The typical annual cost of injectables for patients is estimated to be \$2,000-3,500 and we believe ATX101 will fall somewhere within this price range, whereas surgical procedures such as chin liposuction (est. \$3,500-5,000) are considerably more. We estimate that an initial 3 injections will be recommended per treatment course with the potential to go up to 6, which would lead to an estimated cost per monthly visit of around \$500-750. Most aesthetic procedures, particularly facial injectables, are entirely patient funded and paid on a cash basis and we – and our consultants – believe that this a reasonable price point compared to other more expensive surgical procedures. In consultation with several physicians, they believe that this per treatment price will be right in the “sweet spot” and that there will be little resistance from their patients, especially existing injectable users.



**Multi-Year Duration Of Treatment Helps Justify ATX101 Cost.** Additionally, while the cost of treatment of ATX101 (\$2,000-3,500) will be considerably more than one year of treatment with toxins or fillers (around \$1,000-1,500 or greater), we believe that in reality, the price is comparable because of ATX101's durability of treatment effect. Botox requires treatment every year – normally every six months – therefore, the cost will be incurred each year, while ATX101 treatment has a duration of action that has been shown to last multiple years in the majority of patients thus far. Data from the long-term, 5-year, Phase II ATX101 follow-up study that is discussed later in the report, suggests that over 90% and 80% of subjects maintained at least the same level of correction for approximately two and three years, respectively. So far, at least 80% of patients (n=10) have also maintained the same level of aesthetic correction up to 4 years. While these numbers are impressive, we acknowledge that the patient numbers on these cohorts are still relatively low and that additionally confirmatory data will need to be collected. If the ATX101 treatment cost is spread over the 2, 3, and 4 year time intervals, the adjusted annual cost of treatment is \$1,000-\$1,700, \$670-1,100, or \$500-850, which is right around – or even below – the annual cost of treatment with toxins or fillers. In further support, a recent ASAPS study suggested that 92% of patients preferred gradual results lasting over 2 years, versus immediate results lasting only 12 months. We believe that when considering the cost of treatment, patients will view the duration of effect of ATX101 favorably and that in addition to the observed clinical effect, the durability of ATX101 will help justify the cost of treatment absorbed in that first year.

**Initial ATX101 Specialty Sales Force Estimated To Be 60-80 Representatives At Launch.**

A specialty sales force would be required to market the product to dermatologists and plastic surgeons, which often, either operate in the same office or have a significant amount of treatment overlap. In the U.S. in 2010, market research suggests that dermatologists and plastic surgeons performed 60-80% of facial injectable procedures, which supports Kythera's initial strategy. While the Company plans to commercialize the drug in the US with a specialty sales force, partner Bayer will take the lead on commercialization outside of the U.S. and Canada and will pay Kythera royalties on net sales. In the US, Kythera has stated that a sales force of 60-80 representatives would be reasonable for ATX101 launch and that they would continue to add representatives as the launch progresses. In the initial part of the launch, Kythera believes that physician training is critical. Therefore, once ATX101 is approved and launched, it would first be put into the hands of experienced injectors and then those doctors would be used to increase awareness and expand the market. We believe that given the checkered experience observed with compounded deoxycholate injections, that targeting the most experienced doctors first is the best strategy to ensure proper administration and patient experience early into the launch.

One of our consultants stated that ATX101 “will be an amazing addition to his armamentarium”.

Market research (from Kythera but also confirmed via our consultants) suggests that roughly 80% of existing toxin/filler patients have excess treatable submental fat and that roughly 90% of dermal filler patients are also treated with toxins. Thus, while ATX101 would be creating a new product class, we believe the market is ripe for such an entrant and that positive synergies exist with current injectables that will lead to gaining increased share of the existing toxin/filler patients. Also, we believe doctors will appreciate the ability to add another product to their treatment arsenal and combine it with another product such as a toxin, thereby effectively



increasing his revenue per patient visit. One of our consultants stated that ATX101 “will be an amazing addition to his armamentarium” and that “it’s already happening everywhere” through the use of compounded products, so he does not see significant resistance for ATX101 uptake in a market that actually, already exists. Moreover, no capital equipment will need to be acquired or space cleared for the ATX101 procedure, so it should be relatively easy for the physician to include in their practice.

**Drug Product Manufacturing Underway.** Kythera’s current drug substance supply chain involves three contractors: (1) the supplier of raw material; (2) the supplier of starting material for the drug compound; and (3) the supplier of synthetic deoxycholate. The Company currently has an exclusive supply agreement with Pfizer as the single-source supplier of key raw material through December 2014. Pfizer sends the raw material to SAI in India, which will then work to supply the starting material for the drug compound to the eventual supplier of synthetic deoxycholate. Currently, the Company is in a validated phase with the initial drug substance manufacturer Albany Molecular Research, Inc. (AMRI), who will supply synthetic deoxycholate, and it is working on validating a second drug substance manufacturer, Cambridge Major Laboratories (CML). The Company is identifying secondary suppliers to ensure that the supply chain remains intact in the case that an unexpected supply disruption occurs. Once the synthetic deoxycholate is produced, it will be passed to Hospira, who is the Company’s drug product fill/finish supplier. In November 2010, Kythera entered into a long-term agreement with Hospira, which expires 5 years after the first day of the month after the first ATX101 sale. Stability runs for Hospira have been completed and the final validation runs will be completed closer to a pre-approval inspection. On the recent second quarter earnings call, the Company mentioned that it is also working to identify a second drug products manufacturer. Once Hospira manufactures the final ATX101 product, it will then be passed to distributors for sale.

### **Intellectual Property Suggests ATX101 Will Be A Long Duration Asset With A 15+ Year Shelf Life**

Worldwide, Kythera has over 80 issued or allowed patents and over 70 pending patent application with claims relating to ATX101. In the U.S., ATX101 is protected by various patents, which have expirations ranging from 2025 to 2030 (and potentially longer depending on patent term restoration). The US Patent and Trademark Office has issued 10 patents relating to ATX101 that include:

- ▶ One patent (US patent number 8,242,294) related to synthetic deoxycholate or pharmaceutically acceptable salts thereof, including the synthetic form used in ATX101, which expires on May 16, 2028.
- ▶ Two formulation patents (US patent numbers 8,101,593 and 8,367,649) that both expire on March 2, 2030.
- ▶ Method of use patents – US patent numbers 7,622,130 and 7,742,230, which both expire on December 10, 2027 and 8,298,556, which expires on August 3, 2025.





- ▶ Manufacturing patents related to a synthetic form of deoxycholate – US patent number 7,902,387, which expires on December 21, 2028, and patent numbers 7,994,351, 8,362,285, and 8,367,852, which all expire on May 16, 2028.

Because deoxycholate is a naturally occurring substance it is not eligible for composition-of-matter patent protection in certain jurisdictions, including the U.S. However, ATX101 contains a synthetic form of deoxycholate, which Kythera believes is eligible for composition of matter patent protection. The Company has composition of matter patent applications that include the synthetic form currently pending with the US PTO and European Patent Office. One patent ('294), shown above, was already accepted on August 14, 2012. We believe this patent provides the most protection in the ATX101 patent estate.

### **Data From Phase III Pivotal US And Canadian Trials – REFINE1 and REFINE2 – Expected Soon**

To-date, in 12 clinical trials, over 2,500 and 1,500 patients have been enrolled and treated with ATX101, respectively. Pivotal European studies have been successfully completed by partner Bayer and a MAA submission is expected by year-end 2013.

To-date, in 12 clinical trials, over 2,500 and 1,500 patients have been enrolled and treated with ATX101, respectively. Pivotal European studies have been successfully completed by partner Bayer and a MAA submission is expected by year-end 2013. At the moment, Kythera has pivotal Phase III US and Canadian trials (REFINE1 and REFINE2) for ATX101 ongoing and top-line data is expected by the end of this quarter, or early fourth quarter. The studies were initiated in March 2012 and enrollment of more than 1,000 patients in ~70 centers in the US and Canada was completed just 5 months later in August 2012. We expect this study to be sufficiently powered as the European pivotal trials, which had fewer patients (723), were highly statistically significant. Upon announcement of the topline results, the Company has stated that they anticipate issuing a release that includes data on the primary endpoints and some summary findings on the secondary endpoints and safety measurements, with the complete data set to be presented at a scientific conference later in the year.





Exhibit 8. ATX101 Has A Robust Clinical Program

Phase	# of Studies	Study Description
completed	I	6 Pharmacokinetic, histology, serum lipid/adipokine, tolerability studies
	II	3 Multicenter, randomized, placebo-controlled, parallel-group studies of safety and efficacy
	III	2 (Europe)
2 (U.S. and Canada)		Pivotal multi-center, randomized, double-blind, placebo-controlled studies using clinician and patient-reported measurements and MRI
ongoing	IIIB and long-term follow-up	3 Open-label, multi-center, 12-month safety study; Non-treatment follow-up studies going out as long as 5 years

Source: Kythera Investor Presentation

**Potential NDA Submission To Include Efficacy And Follow-Up Safety Data Post New PDUFA V Guidance.** Previously, the Company guided for topline data from the REFINE trials to read out in mid-2013. However, following the updated FDA guidance on what constitutes a complete NDA under PDUFA V, which became effective October 2012, the Company will now report topline results late in the third quarter or early fourth quarter 2013. In addition to the primary endpoint for the study that is measured 12 weeks after the last treatment, there is a protocol-specified follow up safety visit, which occurs an additional 12 weeks after the primary endpoint. Based upon the new PDUFA V guidance, the Company has decided to unblind the trial results after the final follow-up safety visit as opposed to the primary efficacy endpoint, which was originally planned. The potential NDA submission for ATX101 will now include both the efficacy and follow-up safety data. We believe that if not already, the Company should be almost all the way through the safety follow-up portion of the study and that results could be reported shortly.

**Measuring ATX101 Clinical Response Three Ways – Clinician-Reported, Patient-Reported, And Objective Endpoints.** In ATX101's various clinical trials, clinical response is measured by (1) clinician-reported submental fat rating scale (CR-SMFRS); (2) patient-reported outcomes (PRO), which include the patient-reported submental fat rating scale (PR-



SMFRS), the subject self-rating scale (SSRS), and the patient-reported impact scale (PR-SMFIS); and (3) objective measurements of submental fat by MRI or calipers. Importantly, these scales were developed and validated using scientific principles and process recommendations per the FDA's Patient Reported Outcome Guidance from 2009 to ensure reliability and they are similar to other rating scales used for botulinum toxins and dermal fillers. The clinician-reported scale, CR-SMFRS, is a numbered scale (0-4) from less to more severe submental fat as analyzed by prominence and convexity using scaled photographic images to guide the clinician. Alternatively, the patient-reported outcome scale, PR-SMFRS, is question-based self-assessment and consist of multiple potential answers relating to the appearance and amount of the patient's chin fat on a 0 (none) to 4 (very large) scale. The patient-reported SSRS, which was used in Europe as a primary endpoint, is a similar self-assessment of patient satisfaction with the appearance of their face and chin, but on a 7-point ordinal scale from 0 (extremely dissatisfied) to 6 (extremely satisfied) when asked, "...how satisfied do you feel with your appearance at the present time whether or not in your judgment it is due to treatment with ATX101?" While the primary patient-reported endpoints (SSRS vs. PR-SMFRS) are technically different between the European and US/Canadian studies, we wouldn't expect this change to have a significant effect on the outcome of the study. Per the previously mentioned FDA PRO guidance released in 2009, Kythera decided to use the PR-SMFRS scale as part of the primary endpoint, as opposed to the previously used SSRS. Kythera states that these scales were rigorously validated by tests, including demonstrations of multi-patient and multi-physician inter- and intra-rater reliability.

**Exhibit 9. Comparison Of Primary Endpoints Used In Phase European and US/Canadian Clinical Trials**

Primary Regulatory Endpoints		What Measured	Scale	How Used
Europe (Co-Primary Endpoints)	Clinician Reported	Submental Fat (5 pt. Scale)	CR-SMFRS	Proportion of Patients > 1 pt. change  <i>and</i>  Proportion of Patients ≥ Category 4
	Patient Reported	Satisfaction with Appearance of Face and Chin (7 pt. Scale)	SSRS	
US and Canada (Co-Primary Endpoints)	Clinician Reported	Submental Fat (5 pt. Scale)	CR-SMFRS	Composite CR-SMFRS ≥ 1 pt. change and PR-SMFRS ≥ 1 pt. change <i>and</i>  Composite CR-SMFRS ≥ 2 pt. change and PR-SMFRS ≥ 2 pt. change
	Patient Reported	Submental Fat (5 pt. Scale)	PR-SMFRS	

Source: Cowen and Company, Kythera



**Both Composite Endpoints Are Required For Clinical Trial Success.** REFINE1 and REFINE 2 are identical, pivotal, randomized, double-blind, Phase III trials being conducted to assess the efficacy and safety of ATX101 dosed 2 mg/cm<sup>2</sup> versus placebo. We believe there is a clear rationale here to forego the 1 mg/cm<sup>2</sup> dose that was used in the pivotal European trials as the 2 mg/cm<sup>2</sup> dose results were for the most part numerically superior and the adverse event profile between the two doses was comparable. Between both trials, over 1,000 patients were enrolled and they were randomized 1:1 to AXT101:placebo, so in each study there will be approximately 250 patients per arm. In these studies, up to 6 treatments will be performed at 28-day intervals suggesting a treatment period that is potentially 50% longer as what was seen in the European studies. We believe it is possible that the longer treatment period may provide for even better results as the data in the figure below suggests. The co-primary efficacy endpoints will be both 1 and 2 grade changes in the CR-SMFRS/PR-SMFRS composite 12 weeks after the final treatment. Meaning that for a 2 grade change in the composite endpoint, a patient will need to achieve both a 2 grade improvement in the CR-SMFRS as well as a 2 grade improvement in the PR-SMFRS measure. Note that the 1 and 2 grade improvement endpoints in the European studies, as well as the composite scale endpoints used for the U.S. and Canadian trials, are very similar to the clinical experience for Botox for crow's feet, which measured 1 and 2 grade improvements in the Facial Wrinkle Scale as well as improvements in a composite endpoint.

The Company completed an interesting retrospective analysis below, which seems to suggest that if the data in the Phase III European or Phase IIIb US open label studies is replicated in the ongoing Phase III US and Canadian studies, that both primary composite endpoints will be achieved.

The Company states that the composite endpoint is designed to "eliminate variances that may be seen in data from either scale alone and substantially increases the difficulty in achieving any given threshold of improvement." Therefore, if a patient has a 2 grade improvement in CR-SMFRS, but only a 1 grade improvement in PR-SMFRS, then they will be considered to have a 1 grade improvement with the composite. The Company completed an interesting retrospective analysis below, which seems to suggest that if the data in the Phase III European or Phase IIIb U.S. open label studies is replicated in the ongoing Phase III U.S. and Canadian studies, that both primary composite endpoints will be achieved. Additionally, the analysis seems to suggest that there will be a benefit to the longer treatment duration (up to 6 treatments versus 4) as the U.S. data is substantially improved from the European data. With respect to the composite endpoints described above, we believe both must be achieved for trial success and eventual regulatory approval, even though a 1 grade improvement in the composite is still considered clinically meaningful.



Exhibit 10. CR-SMFRS/PR-SMFRS US/Canadian Composite Endpoints Calculated From Previous Trial Data

European Phase III (Studies 16 & 17) <i>up to 4 Tx</i>			US Open-label (Study 26) <i>up to 6 Tx</i>
Endpoints	Placebo (n=240)	ATX-101 2mg/cm <sup>2</sup> (n=240)	ATX-101 2mg/cm <sup>2</sup> (n=162)
1-Grade Improvement in Patient/ Clinician Composite	15.5%	49.0%	71.3%
	<i>p&lt;0.001</i>		
2-Grade Improvement in Patient/ Clinician Composite	0.4%	7.5%	14.0%
	<i>p&lt;0.001</i>		

Source: Cowen and Company; Kythera Investor Presentation

Improvement in PR-SMFIS, a 10-point ordinal scale based upon the patient's perception of submental fat, will be a secondary endpoint and the objective endpoint will measure the reduction in the volume of submental fat using MRI (in ~400 patients), as opposed to calipers used in the European studies. Other secondary measures will evaluate patient satisfaction (SSRS), perception of change (PR-SMFIS), and the psychological impacts associated with reduction of submental fat.

**Ongoing, Open-Label Phase IIIb Study.** Kythera is conducting an open-label Phase IIIb study (ATX-101-11-26) in 165 adults that will receive up to 6 ATX101 injections every 28 days. The study included 78% females and 22% males with a mean age of 47. Interim analyses were reported by the Company on March 2 and April 6, 2013, at the 2013 American Academy of Dermatology (AAD) Late Breaking Research Symposium and the 11<sup>th</sup> Anti-Aging Medicine World Congress, respectively.

96% of patients had unchanged or improved skin laxity based on the clinical-rated Submental Skin Laxity Grading Scale (SMSLG), which suggests that even once the subcutaneous fat is reduced, that skin integrity in the treated area remains strong.

At 12 weeks post AXT101 treatment, 87% and 83% of subjects achieved at least a 1 grade improvement from baseline on the CR-SMFRS and PR-SMFRS, respectively. 97% of patients reported improvement in chin and neck definition and 71.3% and 14.0% of subjects had at least a 1 and 2 grade improvement on the CR-SMFRS/PR-SMFRS composite, respectively. Mean changes in CR-SMFRS and PR-SMFS 12 weeks post treatment were -1.3 and -1.2, respectively. Lastly, 96% of patients had unchanged or improved skin laxity based on the clinical-rated Submental Skin Laxity Grading Scale (SMSLG), which suggests that even once the subcutaneous fat is reduced, that skin integrity in the treated area remains strong. 95% of patients were satisfied with treatment based on the Global Post Treatment Satisfaction Scale.



A recent analysis of the patients showed that more than 90% of patients sustained or improved their response (response is defined as a greater than 1 grade change from baseline on the CR-SMFRS) at two years (n=75). Furthermore, more than 80% of patients sustained or improved their response at three and four years (n=50 and n=10, respectively).

**5-Year, Long-Term Follow-Up Study In Phase II Patients Indicates Duration Of Action Up To 2 Years And Beyond.** As previously mentioned, a long-term, Phase II, non-treatment follow-up study to assess the safety and duration of ATX101 treatment effects is also being conducted to capture up to five years of data from certain patients who completed Phase II studies. A recent analysis of the patients showed that more than 90% of patients sustained or improved their response (response is define as a greater than 1 grade change from baseline on the CR-SMFRS) at two years (n=75). Furthermore, more than 80% of patients sustained or improved their response at three and four years (n=50 and n=10, respectively). While this data is intriguing, we admit that the current number of patients completing follow-up beyond two years is limited. No long-term safety concerns have been reported thus far.

### Positive Phase III European Results – A Good Proxy For Pending North American Phase III Results

The two European Phase III pivotal trials (Study 16 and 17), which were completed in April 2012, achieved statistical significance on both the primary and secondary clinical endpoints. Both of these trials were identical and designed to assess the efficacy, safety, and tolerability of 1 or 2 mg/cm<sup>2</sup> ATX101 versus placebo in patients with unwanted submental fat. Up to 4 treatments were administered in this trial over 28-day intervals and a total of 723 patients were enrolled in 57 centers with the primary assessment being performed 12 weeks post treatment. The two primary endpoints were the clinical-reported CR-SMFRS and the patient-reported SSRS. The CR-SMFRS endpoint is analyzed as the proportion of patients with a  $\geq 1$  point change, while the SSRS endpoint is the proportion of patients  $\geq$ Category 4.

Trial ATX-101-10-16 (Study 16) included 363 patients and met the pre-specified primary endpoints of CR-SMFRS and SSRS at both doses. Dose-dependent and statistically significant improvement in PR-SMFRS, caliper measurements of submental fat, and PR-SMFIS were also observed. Similar to the Phase II studies, patients reported statistically significant increases in happiness with the appearance of their chin fat and self-perceptions of youthfulness. They also reported statistically significant increases in looking less overweight. In addition, patients reported statistically significant difference in feeling less embarrassed, bothered, and self-conscious about the appearance of their chin fat. Lastly, a statistically significant difference in overall satisfaction with treatment when compared to placebo was observed with patients.

Trial ATX-101-10-17 (Study 17) included 360 patients and had very similar results. Study 17 achieved both primary endpoints and had similar outcomes on secondary outcome measures as shown in the table below. The only slight distinction we could make between the two studies is that the 1 and 2mg/cm<sup>2</sup> dose data in Study 17 was numerically closer and had less separation than observed with the data from Study 16. With that said, both doses were highly statistically significant, and we don't anticipate this observation to have any effect on the successful outcome of the ongoing US and Canadian studies, which use the higher dose.



Exhibit 11. ATX101 Data Summary From US Phase IIb and European Phase III Trials

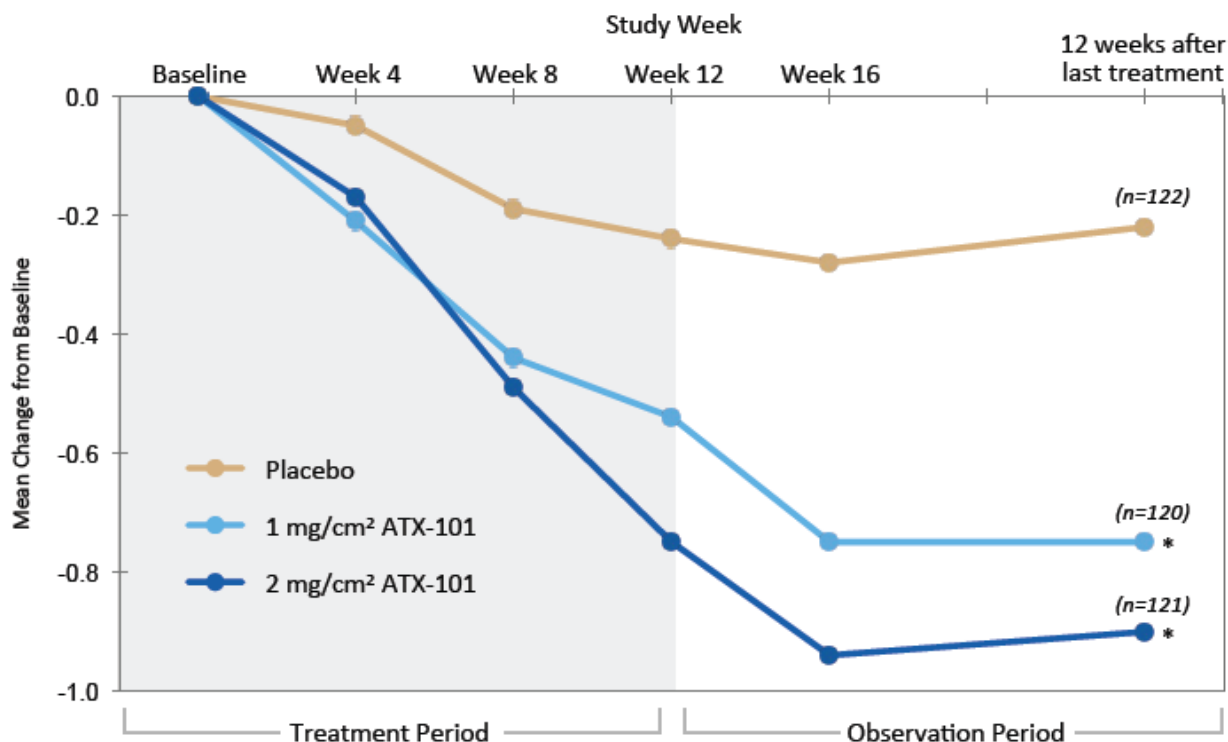
Endpoint	Measure (all vs. placebo)	Phase IIb (up to 6 Tx, @ 28 days)		EU Phase III (up to 4 Tx, @ 28 days)			
				ATX-101-10-16		ATX-101-10-17	
		1 mg/cm <sup>2</sup> (n=40)	2 mg/cm <sup>2</sup> (n=42)	1 mg/cm <sup>2</sup> (n=120)	2 mg/cm <sup>2</sup> (n=121)	1 mg/cm <sup>2</sup> (n=120)	2 mg/cm <sup>2</sup> (n=122)
CR-SMFRS	mean Δ	p=0.052	p=0.003	p<0.0001	p<0.0001	p<0.0001	p<0.0001
	% of patients with ≥ 1 pt improvement	p=0.016	p=0.003	p<0.001	p<0.001	p<0.001	p<0.001
	% of patients with ≥ 2 pt improvement	NS	NS	p=0.028	p<0.001	p=0.020	p=0.021
PR-SMFRS	mean Δ	NS	p<0.001	p<0.0001	p<0.0001	p<0.0001	p<0.0001
	% of patients with ≥ 1 pt improvement	NS	p=0.022	p<0.001	p<0.001	p<0.001	p<0.001
	% of patients with ≥ 2 pt improvement	NS	p=0.011	p=0.015	p<0.001	p<0.001	p<0.001
SSRS	% of patients ≥ 4	p=0.005	p<0.001	p<0.001	p<0.001	p<0.001	p<0.001
PR – SMFIS (each measure*)	mean Δ	p<0.05*	p≤0.001	p≤0.01	p<0.0001	p≤0.001	p<0.001
MRI Volume	mean Δ	p<0.05	p=0.006	nm	nm	nm	nm
Calipers	mean Δ(%)	nm	nm	p<0.001	p<0.001	NS	p=0.046
Global Post-Tx Satisfaction	% of patients ≥ 4	p<0.001	p<0.001	p<0.0001	p<0.0001	p=0.0001	p=0.0001

Source: Cowen and Company; Kythera 2012 10-K

For the CR-SMFRS measure in Study 16 of the European trials as shown below, separation between treatment and placebo occurs as early as week 4 with a clear dose response observed. After the last treatment, additional reduction in submental fat was observed through week 16 with a sustained effect through the primary endpoint at week 24. Curves from the second study, Study 17, were similar with both doses reaching statistical significance at 12 weeks post treatment.



Exhibit 12. CR-SMFRS Primary Endpoint From European Phase III Trial (Study 16)



\*  $p < 0.001$  ATX-101 vs. placebo

Source: Kythera Investor Presentation

Below, we provided before and after photographs of patients from the Phase III trials conducted in Europe. Two patients with varying level of responses on both the clinician-reported CR-SMFRS scale and the patient-reported SSRS scale are shown. The first patient has a noticeable reduction in submental fat between baseline and 12 weeks after treatment, which resulted in a 1 point grade reduction on CR-SMFRS and a 2 point improvement on SSRS. The second patient had an even more noticeable reduction in submental fat as demonstrated by a 2 point reduction on the CR-SMFRS and an accompanying 4 point improvement in SSRS.





Exhibit 13. Clinician-Reported CR-SMFRS and Patient-Reported SSRS From Phase III European Trials – Patient 1

Age 42

**Before** <sup>1</sup>

BMI 24.2



**After** <sup>2</sup>

BMI 25.3



1-grade reduction on CR-SMFRS (Clinician Rating) and a  
2-point improvement in satisfaction with the appearance of her face and chin (SSRS)

1. Baseline

2. 12 Weeks after last treatment

Source: Kythera Investor Presentation

**Exhibit 14. Clinician-Reported CR-SMFRS and Patient-Reported SSRS From Phase III European Trials – Patient 2**

Age 33

**Before**<sup>1</sup>  
BMI 21.6**After**<sup>2</sup>  
BMI 21.2

2-grade reduction on CR-SMFRS (Clinician Rating) and a  
4-point improvement in satisfaction with the appearance of her face and chin (SSRS)

- 1. Baseline
- 2. 12 Weeks after last treatment

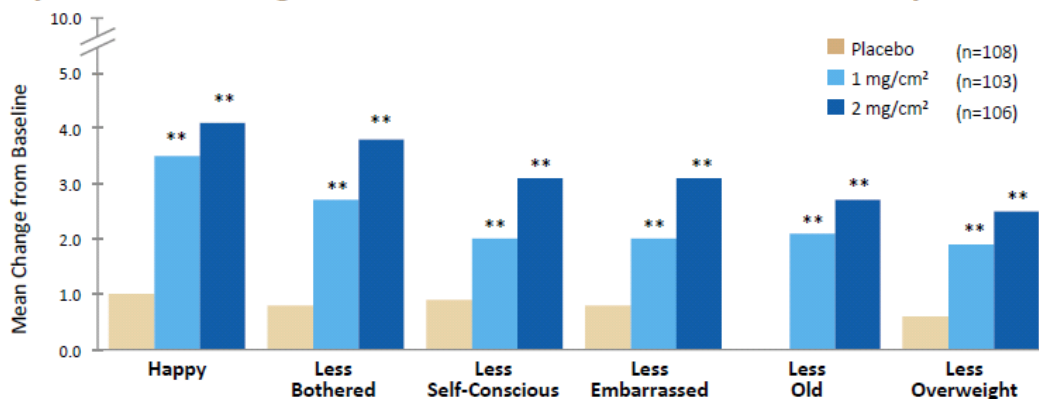
Source: Kythera Investor Presentation

Secondary endpoints, which were also statistically significant, included additional patient-reported measures such as PR-SMFRS, PR-SMFIS, and post treatment patient satisfaction. PR-SMFIS measures, which were all statistically significant ( $p \leq 0.01$ ), are shown below.

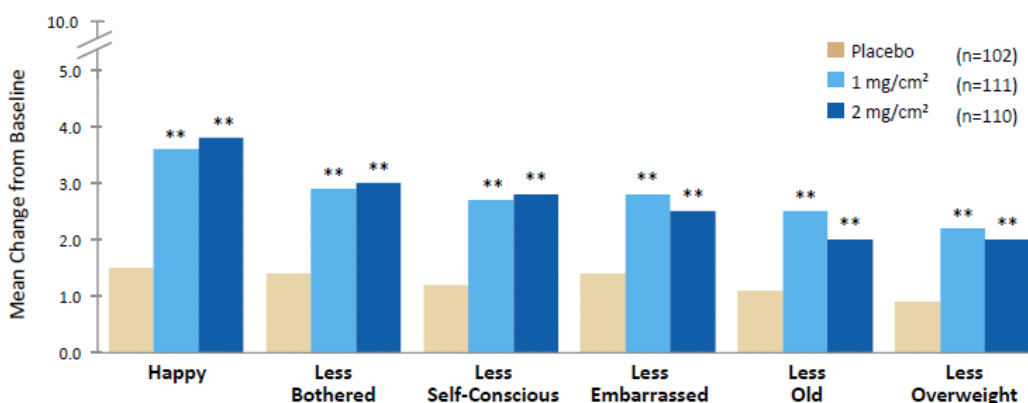


## Exhibit 15. PR-SMFIS Scores From Phase III European Pivotal Trials

## Study 16, Mean Change from Baseline in PR-SMFIS, at Week 24 by Treatment Group



## Study 17, Mean Change from Baseline in PR-SMFIS, at Week 24 by Treatment Group



Source: Cowen and Company, Kythera

The objective endpoint of submental fat as measured by calipers was also statistically significant. All of these secondary/tertiary endpoints were measured as mean change, except for the global patient satisfaction score, which is measure as the proportion of satisfied patients.

Worth noting, bruising post injection was surprisingly minimal when compared to placebo. For a patient population whose only real option is surgery, this is an added benefit as bruising from surgical approaches can last for several days and potentially up to two weeks.

**Adverse Events Of Pain/Burning, Bruising, Swelling, and Numbness – Unfortunately – Are Expected And Should Be Tolerable.** In the previously conducted Phase III European trials, the most common adverse events observed were pain/burning (+50-60% over PBO), swelling (+30-35% over PBO), numbness (+40-45% over PBO), erythema (redness of the skin; +15-20% over PBO), and induration (hardness or sclerosis of the skin; +15-20% over PBO). We believe that these adverse events should be expected with a drug that induces lipolysis and essentially destroys fat cells, or human tissue. In fact, there may be a psychological benefit to the appearance of pain/burning, swelling, and numbness. If these side effects were not apparent then patients may assume that the treatment is not working. We believe that in this particular patient population, where people are used to experiencing pain, bruising,



swelling, and numbness with other procedures, that these side effects have a psychological association with efficacy and our consultants agree. In fact, once approved, we believe many of the initial ATX101 patients will be used to receiving aesthetic treatments and will already be somewhat de-sensitized to pain associated with procedures. While these patients may have an increased tolerance for these side effects, ensuring that the adverse events are not too severe or long in duration is still important to promoting and sustaining the use of the product. The Company states that the observed adverse events are limited to the injection site and that they are transient in nature – making them more tolerable. Worth noting, bruising post injection was surprisingly minimal when compared to placebo. For a patient population whose only real option is surgery, this is an added benefit as bruising from surgical approaches can last for several days and potentially up to two weeks.

**Exhibit 16. Adverse Event Profile From Phase III European Trials**

Event	Placebo (%)		ATX-101: 1 mg/cm <sup>2</sup> (%)		ATX-101: 2 mg/cm <sup>2</sup> (%)	
	Study 16	Study 17	Study 16	Study 17	Study 16	Study 17
<b>Pain/Burning</b>	25.4	28.9	77.3	89.0	79.3	88.5
<b>Swelling</b>	30.3	21.9	65.5	55.9	66.1	54.9
<b>Numbness</b>	2.5	1.8	46.2	40.7	50.4	50.0
<b>Erythema</b>	23.0	21.9	38.7	42.4	37.2	43.4
<b>Induration</b>	3.3	0.9	18.5	15.3	27.3	19.7
<b>Bruising</b>	41.0	50.0	55.5	60.2	53.7	54.9
<b>Pruritus</b>	0.8	1.8	9.2	9.3	2.5	7.4
<b>Paresthesia</b>	1.6	0.0	4.2	7.6	4.1	9.8
<b>Nodule</b>	0.0	0.0	2.5	0.8	7.4	7.4

Source: Cowen and Company; Kythera Investor Presentation

Our consultant, who has a significant amount of experience with ATX101, notes that the throbbing, itching, and tenderness onsets 5-10 minutes post treatment. 24-72 hours post treatment is when the most profound swelling is observed, which is primarily under the chin where the injections were administered. While the swelling is admittedly significant, our consultant notes that the majority of patients can go back to work if they want to or some may receive treatment before the weekend, which would provide enough recovery time while the majority of swelling occurs. Worth noting, our consultant has observed the most significant adverse events after the first treatment in treatment-naïve patients and that the adverse events



become less significant with successive treatments indicating that patient becomes desensitized to treatment. As the number of ATX101 treatment increase, the adverse events tend to be less severe than previously observed.

Rare instance of transient facial nerve or muscle impairment were reported in less than 0.2% of procedures and each case resolved. The Company noted that there was a higher incidence of pain rated as moderate or severe in this trial when compared to Phase II studies, but that patient satisfaction remained high and withdrawal from treatment due to adverse events was similar to Phase II and less than 10%. In fact, the Company stated that a significant amount of these dropouts came from patients already satisfied with treatment.

A two-year, non-treatment, follow-up trial has been initiated by Bayer since the completion of these trials, which will include a subset of the Phase III patients to assess long-term safety and duration of treatment effects.

### Leading Up To Phase III – Other Studies To Support A Complete Filling Package

In consultation with the FDA, the Company has completed preclinical efficacy, safety, pharmacology, PK/bioavailability, and single/repeat-dose toxicity studies of ATX101. Genotoxicity, local tolerance, and formulation bridging studies were also conducted along with reproductive toxicity testing. These studies included chronic studies up to 9 months in duration. A total of 463 patients participated in Phase I and Phase II clinical studies of ATX101, which included two early studies for the treatment of superficial lipomas, a type of benign fatty tumor found under the skin.

### Six Phase I Studies Show ATX101 Is Well Tolerated At Varying Dose Levels (0-4mg/cm<sup>2</sup>) And Reaches Peak Blood Levels 30 Minutes Post Administration

Six Phase I studies were conducted in a total of 101 patients with the aim of looking at safety, tolerability, PK, and histopathology at doses ranging from 0-4mg/cm<sup>2</sup>. From 2008 to 2012, three PK studies were conducted, which showed that ATX101 treatment was well tolerated. Here the Company was able to test a variety of concentrations, volumes, and injection grid patterns to refine the protocol. The most common adverse events were mild to moderate local injection site reactions. Peak, dose-related, ATX101 blood levels were reached within 30 minutes of administration and returned to baseline levels within 12-24 hours. Also, comparable overall exposure of ATX101 was observed when injected into the abdomen and submental fat. No serious adverse events were reported with the final proposed commercial formulation of 2mg/cm<sup>2</sup> and no subjects discontinued due to adverse events.

Histological evaluation of the excised fat tissue showed the initial destruction of adipocytes, followed by a local immune response, and thickening of the fibrous septae within the fat tissue.

**Findings From Histology Support ATX101's Mechanism of Action.** Interestingly, in a 14-patient histology study conducted from 2008-2009, ATX101 was injected into the abdominal fat of patients who were scheduled to undergo abdominoplasty at differing time points. Histological evaluation of the excised fat tissue showed the initial destruction of adipocytes, followed by a local immune response, and thickening of the fibrous septae within the fat tissue. We believe this observation strongly supports the proposed mechanism of action for ATX101.



ATX101 treatment did not result in adverse levels of serum lipids (cholesterol, triglycerides, and free fatty acids) or metabolic and inflammatory markers.

**ATX101 Treatment Does Not Lead To Adverse Levels In Serum Lipids.** A 10-patient lipid study was also conducted during 2010-2011, which evaluated the blood levels of lipids and other biological markers following administration of ATX101. ATX101 treatment did not result in adverse levels of serum lipids (cholesterol, triglycerides, and free fatty acids) or metabolic and inflammatory markers.

Lastly, in a formulation and tolerability study, two formulations of ATX101 – with or without a benzyl alcohol preservative – were tested for comfort and tolerability and both formulations were considered acceptable for use. The Company opted to use the benzyl alcohol formulation for the US Market, but benzyl alcohol was not included in the formulation in Europe as the European Union is less favorable towards the use of preservatives in drug products.

#### **Phase II Studies Demonstrate ATX101 Efficacy On Various Endpoints And Supports Phase III Trials in Europe and US/Canada**

Three randomized Phase II studies were conducted in 284 patients and evaluated various dosing regimens of ATX101 versus placebo. Two early Phase IIa studies formed the basis of Bayer's pivotal European Phase III trials and one Phase IIb study provided the basis for the ongoing US and Canadian Phase III trials. Across all three Phase II studies, ATX101 was well tolerated with the adverse event profile consisting of transient, local injection site reactions of mild to moderate severity which included most commonly pain as well as numbness, bruising, swelling, induration, and redness. Itching, nodules, and tingling, were also reported, but less frequently. Most injection site reactions resolved within the 28-day treatment interval with some cases extending beyond, but eventually diminishing over the treatment period. Rare instances of transient facial nerve or muscle impairment, which results in an asymmetric smile, were reported in less than 0.2% of procedures across all studies. All of these cases resolved eventually. The 1 and 2mg/cm<sup>2</sup> dosing regimens, which were eventually used in the pivotal European trials, had the best observed tolerability as opposed to regimens with higher concentrations, volumes, or tighter injection grid spacing.

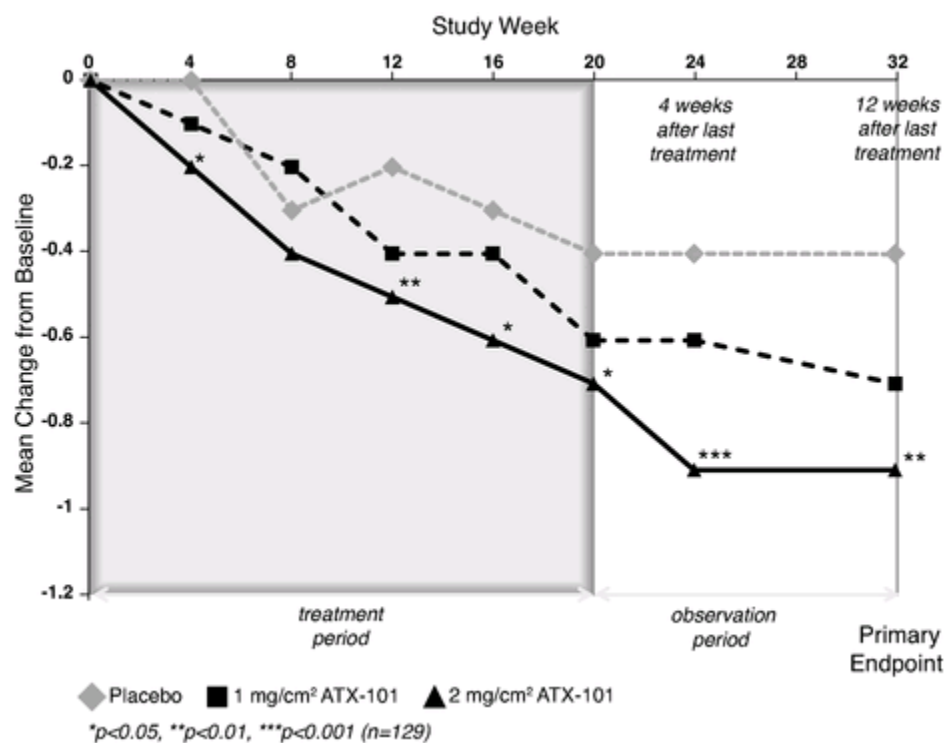
The two initial Phase IIa studies were conducted during 2007-2008 in a total of 155 patients and evaluated various ATX101 concentrations while leaving the exact number of injections to the discretion of the clinician based upon the distribution of submental fat in each patient. Alternatively, the second Phase IIa study held the ATX101 concentration constant, while varying the volume of each injection and the spacing of the grid pattern. In both studies, patients received up to four treatments administered every 28 days. For these studies, statistical significance was observed with CR-SMFRS and a 7-point patient-reported outcome scale, particularly at the 1 and 2mg/cm<sup>2</sup> doses, which were then used in the pivotal European studies.

From 2009 to 2010, a Phase IIb dose-ranging study in 129 patients was conducted in the US and with it, the emergence of the PR-SMFRS endpoint. In addition to employing the CR-SMFRS and PR-SMFRS endpoints, MRI assessments were also completed. In this study, ATX101 at 1 or 2mg/cm<sup>2</sup> versus placebo was measured in patients with moderate to severe submental fat. Similar to the Phase IIa studies, the exact number of injections was at the



discretion of the clinician and patients were allowed to receive up to 6 treatments at 28-day intervals. Both doses were superior to placebo in this study, however, the higher ATX101 dose consistently outperformed the lower dose demonstrating a dose-related response. Mean changes in CR-SMFRS and PR-SMFRS ratings and submental fat volume as measure by MRI in the intent-to-treat population are shown below.

**Exhibit 17. Mean Change From Baseline In CR-SMFRS**

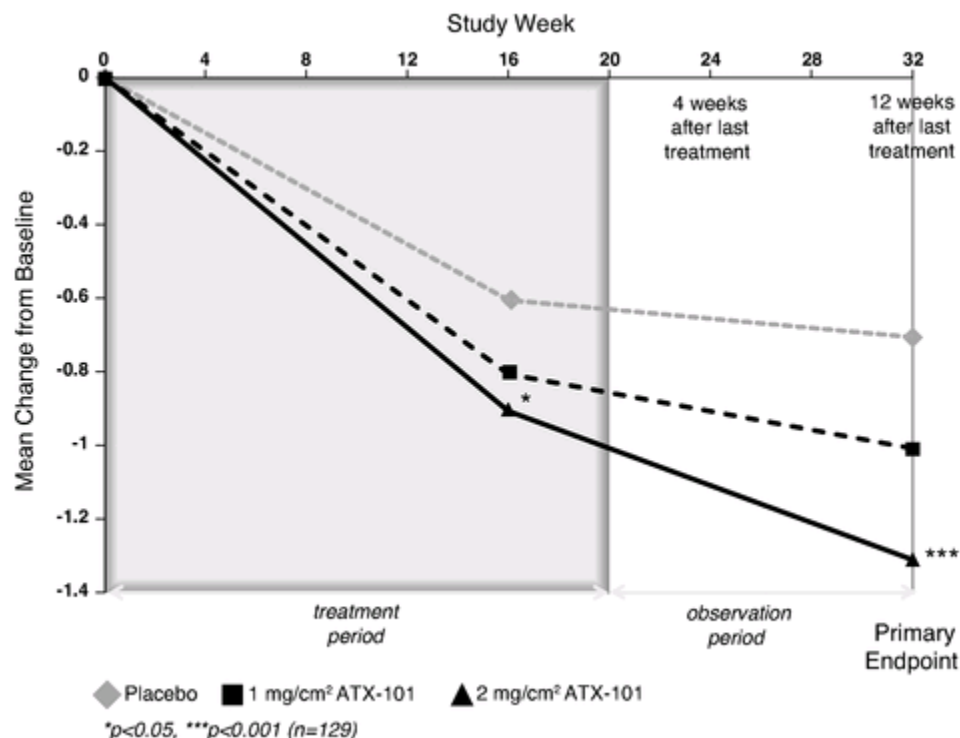


Source: Cowen and Company, Kythera





Exhibit 18. Mean Change From Baseline In PR-SMFRS

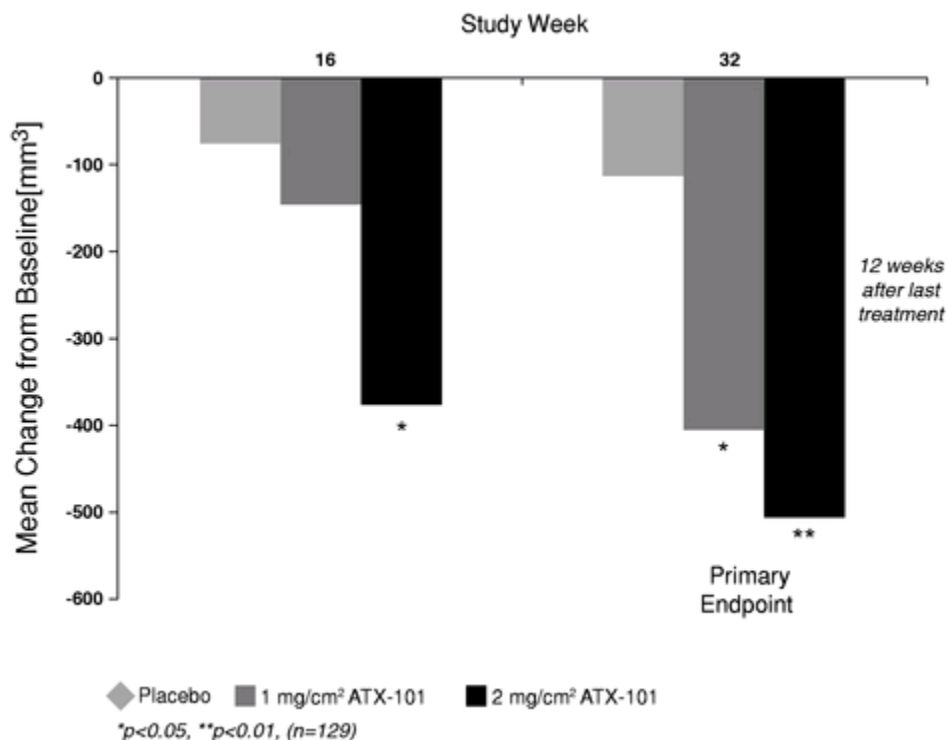


Source: Cowen and Company, Kythera

**Phase IIb MRI Results Positive At ATX101 Dose Used In Phase III US/Canadian Clinical Trials.** On April 13, Kythera reported positive MRI results from the Phase IIb study (ATX-101-09-15) in 129 patients at The Aesthetic Meeting 2013, which is organized by the American Society for Aesthetic Plastic Surgery (ASAPS). The results showed that patients treated with 2mg/cm² ATX101 demonstrated a statistically significant reduction in submental fat thickness as measured from baseline versus placebo on MRI ( $p<0.05$  and  $p<0.001$ ; week 16 and 32, respectively). In addition, statistically significant improvements in self-evaluated visual and psychological impact of submental fat versus placebo on the patient-reported PR-SFIS were observed ( $p<0.001$ ; week 32).



Exhibit 19. Mean Change From Baseline In MRI Volume Of Submental Fat

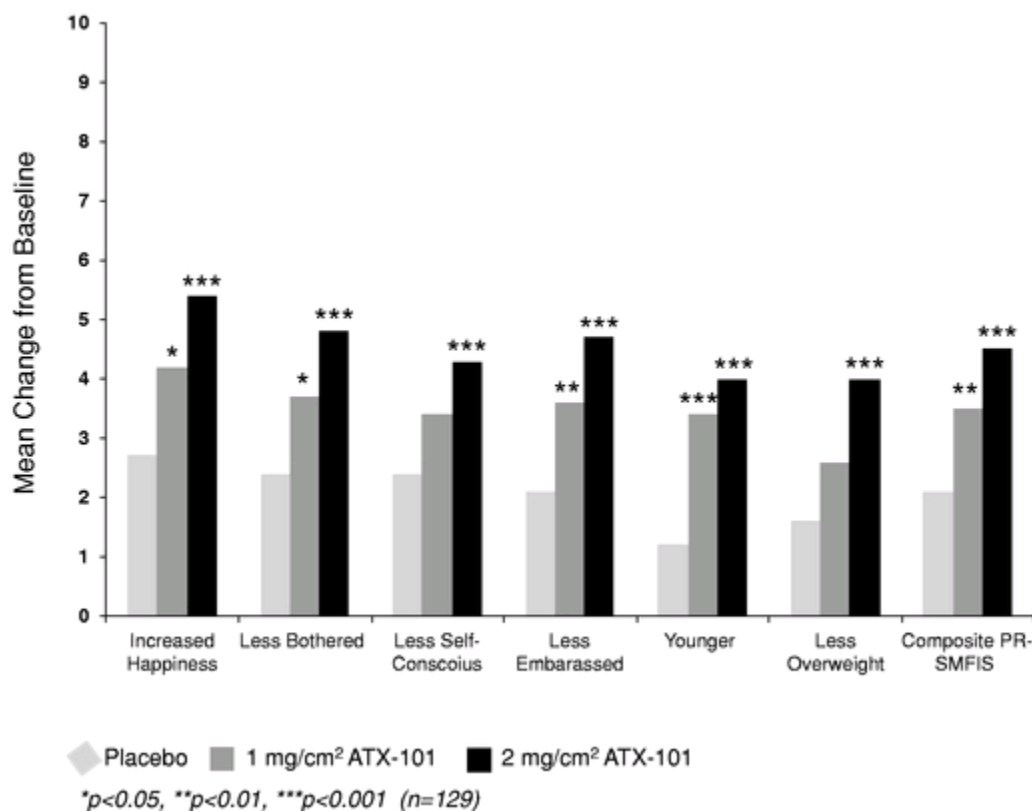


Source: Cowen and Company, Kythera

As mentioned previously, ATX101 treatment resulted in improvements in patients' self-perception as measured by the PR-SMFIS. Statistically significant increases in happiness with the appearance of chin fat and self-perceptions of youthfulness and looking less overweight were observed. Patients also reported looking less embarrassed, bothered, and self-conscious.



Exhibit 20. Mean Change From Baseline In PR-SMFIS



Source: Cowen and Company, Kythera

**218-Patient Cardiac QT/QTc Study Demonstrates Clean ATX101 Cardiac Safety Profile.**

In April, the Company announced that this study met the pre-specified endpoint, which was agreed upon by the FDA. This study demonstrated that at and above ATX101 therapeutic levels, the rate corrected QTc interval in healthy individuals was not prolonged in this study and ATX101 treatment indicated no adverse effects on cardiac function. Additionally, no relationship between QTc interval and plasma ATX101 concentrations was observed. It is our understanding that QTc studies are commonly required for new chemical entities, which will be reviewed by the Dermatology Division at the FDA.



## Exhibit 21. Kythera Annual P&amp;L

KYTHERA - 2013-2020 ESTIMATED ANNUAL EPS BUILDUP (\$MM)											
	2011	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR Comments
U.S. ATX-101 sales					\$80.0	\$140.0	\$225.0	\$325.0	\$425.0	\$505.0	- ATX-101 in Phase III; Launch expected in 2015
Growth Rate						+75%	+61%	+44%	+31%	+19%	- Rapid growth expected; composition of matter patents through 2028
International ATX-101 Royalty					\$10.0	\$15.0	\$20.0	\$30.0	\$40.0	\$50.0	- Bayer royalties on international sales anticipated at 15-20%
License Income	\$13.0	\$19.7		\$40.0	\$40.0	\$40.0	\$40.0	\$40.0	\$40.0	\$40.0	- Recognition of Bayer milestone payments; \$16MM in May 2012
<b>Total Kythera Revenues</b>	<b>\$13.0</b>	<b>\$19.7</b>	<b>\$0.0</b>	<b>\$40.0</b>	<b>\$130.0</b>	<b>\$195.0</b>	<b>\$285.0</b>	<b>\$395.0</b>	<b>\$505.0</b>	<b>\$595.0</b>	
%Change	+189%	+52%			+225%	+50%	+46%	+39%	+28%	+18%	
Cost of Goods	\$1.2	\$1.9	\$0.0	\$4.0	\$19.5	\$29.3	\$42.8	\$59.3	\$75.8	\$89.3	- Payments to Los Angeles Biomedical Institute (LA Biomed)
Gross Profit	\$11.8	\$17.8	\$0.0	\$36.0	\$110.5	\$165.8	\$242.3	\$335.8	\$429.3	\$505.8	
Gross Margin	90.9%	90.2%	90.0%	90.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	- Low-to-mid single digit royalties to LA Biomed
SG&A	\$6.9	\$10.5	\$16.0	\$45.0	\$80.0	\$100.0	\$120.0	\$140.0	\$160.0	\$180.0	+43% - Salesforce expansion in 2015, in preparation for ATX-101 launch
% of Revs	53.0%	53.4%		112.5%	61.5%	51.3%	42.1%	35.4%	31.7%	30.3%	- 100 reps@ \$300K adds \$30MM
R&D	\$15.8	\$43.2	\$35.0	\$35.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	\$45.0	+1% - Clinical trial costs in 2012 of approximately \$20MM
% of Revs	121.4%	219.4%		87.5%	34.6%	23.1%	15.8%	11.4%	8.9%	7.6%	- Additional clinical trials for ATX-101 indications
Operating Expenses	\$22.6	\$53.7	\$51.0	\$80.0	\$125.0	\$145.0	\$165.0	\$185.0	\$205.0	\$225.0	+20%
% of Revenues	174.4%	272.7%		200.0%	96.2%	74.4%	57.9%	46.8%	40.6%	37.8%	
Operating Income	(\$10.8)	(\$35.9)	(\$51.0)	(\$44.0)	(\$14.5)	\$20.8	\$77.3	\$150.8	\$224.3	\$280.8	NM - Operating profit expected in 2016
%Operating Margin	NM	NM	NM	NM	-11.2%	10.6%	27.1%	38.2%	44.4%	47.2%	
Non-Operating Income											
Interest Income	\$0.0	(\$0.9)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	- \$75MM in cash
Interest Expense	(0.3)	0.0	(2.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	- Credit facility of \$15MM
Other Income	0.0	0.0	(0.1)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	
Non-Operating Income	(\$0.3)	(\$0.9)	(\$2.3)	\$0.0	\$0.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Pretax Income	(\$11.2)	(\$36.8)	(\$53.3)	(\$44.0)	(\$14.2)	\$20.8	\$77.3	\$150.8	\$224.3	\$280.8	NM
% of Revs	NM	NM	NM	NM	-10.9%	10.6%	27.1%	38.2%	44.4%	47.2%	
Income Taxes						\$7.3	\$27.0	\$52.8	\$78.5	\$98.3	NM
Income Tax Rate						35.0%	35.0%	35.0%	35.0%	35.0%	
Net Income - Operations	(\$11.2)	(\$36.8)	(\$53.3)	(\$44.0)	(\$14.2)	\$13.5	\$50.2	\$98.0	\$145.8	\$182.5	NM
%Net Margin	NM	NM	NM	NM	NM	6.9%	17.6%	24.8%	28.9%	30.7%	
Extraordinary Items	0.0	0.0	0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Reported Net Income	(\$11.2)	(\$36.8)	(\$53.3)	(\$44.0)	(\$14.2)	\$13.5	\$50.2	\$98.0	\$145.8	\$182.5	NM
Interest Add-Back	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
EPS (GAAP) - Before Ex. Item:	(\$1.00)	(\$2.62)	(\$2.90)	(\$2.10)	(\$0.65)	\$0.60	\$2.10	\$3.90	\$5.60	\$6.75	NM - Profitable in 2016 following the launch of ATX-101
Growth	NM	NM	NM	NM	NM	NM	+250%	+86%	+44%	+21%	
EPS - Extraordinary Items	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
EPS - Reported	(\$1.00)	(\$2.62)	(\$2.90)	(\$2.10)	(\$0.65)	\$0.60	\$2.10	\$3.90	\$5.60	\$6.75	NM
Shares - Fully Diluted (MM)	11.1	14.1	18.4	21.0	22.0	23.0	24.0	25.0	26.0	27.0	+11% - Diluted shares; assuming some onward dilution from warrants

Source: Cowen and Company



## Exhibit 22. ATX101 Market Build

ESTIMATED U.S. COSMETIC NEUROTOXIN TREATMENT MARKET											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Total WW Neurotoxin Sales (MM)	\$2,220	\$2,500	\$2,775	\$3,000	\$3,250	\$3,500	\$3,750	\$4,000	\$4,250	+11%	- Allergan indicates the current WW market is \$2.5B
Growth Rate	+13%	+13%	+11%	+9%	+8%	+7%	+7%	+6%	+6%		- Total WW Neurotoxin growth has been 12-14%
Total U.S. Neurotoxin Sales (MM)	\$1,375	\$1,550	\$1,720	\$1,860	\$2,015	\$2,155	\$2,290	\$2,420	\$2,570	+10%	- Est that U.S. contributes 60-65% of WW Neurotoxin
Growth Rate	+11%	+13%	+9%	+8%	+8%	+7%	+6%	+6%	+6%		- Estimated that Therapeutic growth will be higher than cosmetic
Est U.S. Cosmetic Use % of U.S. Neurotoxin	50%	50%	49%	49%	48%	48%	48%	48%	47%		- Est that roughly 50% of Neurotoxin use is Cosmetic
Total U.S. Cosmetic Neurotoxin Sales	\$695	\$780	\$845	\$900	\$965	\$1,035	\$1,100	\$1,155	\$1,210	+8%	- U.S. market has been relatively healthy
Growth Rate	+10%	+12%	+8%	+7%	+7%	+7%	+6%	+5%	+5%		
Botox U.S. Cosmetic Share (AGN)	77%	75%	75%	74%	74%	74%	74%	74%	74%	-1%	- Leading treatment - market creator
Procedures (000)	1,189	1,300	1,400	1,489	1,589	1,711	1,811	1,900	2,000		- Procedure growth should continue to steadily grow
Average Cost	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450		- Pricing has remained stable
Sales (\$MM)	\$535	\$585	\$630	\$670	\$715	\$770	\$815	\$855	\$900	+7%	
Dysport U.S. Cosmetic Share (VRX)	19%	19%	18%	18%	18%	18%	18%	18%	18%	-1%	- Valeant has taken over marketing; second to market
Procedures (000)	300	322	333	356	389	411	444	467	478		- Essentially undifferentiated product
Average Cost	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450	\$450		- Priced in-line with Botox
Sales (\$MM)	\$135.0	\$145.0	\$150.0	\$160.0	\$175.0	\$185.0	\$200.0	\$210.0	\$215.0	+7%	
Others/Xeomin Share	4%	6%	8%	8%	8%	8%	8%	8%	8%	+12%	- Product was relaunched in January 2012
Procedures (000)	63	125	163	175	188	200	213	225	238		- Essentially undifferentiated product; currently has 5%mar
Average Cost	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400	\$400		- Pricing has been more aggressive
Sales (\$MM)	\$25.0	\$50.0	\$65.0	\$70.0	\$75.0	\$80.0	\$85.0	\$90.0	\$95.0	+20%	
Total Cosmetic Market Sales (MM)	\$695	\$780	\$845	\$900	\$965	\$1,035	\$1,100	\$1,155	\$1,210	+9%	- Growth continuing to be relatively stable
%Growth	+10%	+12%	+8%	+7%	+7%	+7%	+6%	+5%	+5%		
ESTIMATED U.S. DERMAL FILLER TREATMENT MARKET											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Total WW Dermal Filler Market (MM)	\$1,010	\$1,100	\$1,200	\$1,295	\$1,385	\$1,480	\$1,585	\$1,680	\$1,780	+8%	- Allergan ests the WW Dermal Filler market is \$1.1B
Growth Rate	+7%	+9%	+9%	+8%	+7%	+7%	+7%	+6%	+6%		- Total WW Dermal Filler growth has been 8-10%over the las
Total Estimated U.S. Dermal Filler Sales	\$605	\$660	\$720	\$775	\$830	\$890	\$950	\$1,010	\$1,070	+8%	- Est that U.S. is 60-65% of WW Dermal Fillers
Growth Rate	+7%	+9%	+9%	+8%	+7%	+7%	+7%	+6%	+6%		- Market appears to be growing at roughly 8-10%currently
ESTIMATED U.S. SUBMENTAL FAT TREATMENT MARKET - KYTHERA's ATX-101 SHOULD REPRESENT THE MARKET FOR YEARS											
	2012	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	CGR	Comments
Total Estimated WW Submental Fat Treatment Market (MM)				\$125	\$215	\$345	\$500	\$650	\$780		- Lower face should eventually equal Upper/ Mid-Face
Growth Rate					+70%	+60%	+45%	+30%	+20%		- We would assume rapid growth
Total Estimated U.S. Submental Fat Treatment Sales (MM)				\$80	\$140	\$225	\$325	\$425	\$505		- Est that U.S. will contribute 65% of WW ATX-101
Growth Rate					+75%	+61%	+45%	+31%	+19%		- Market should exhibit rapid growth
% of Estimated U.S. Cosmetic Neurotoxin				10%	15%	20%	30%	35%	40%		- Est to reach 40% of U.S. Neurotoxin market by 2020
% of Estimated U.S. Dermal Filler Market				10%	15%	25%	35%	40%	45%		- Est to reach 45% of U.S. Dermal Filler market by 2019
ATX-101 U.S. Submental Fat Share (KYTH)				100%	100%	100%	100%	100%	100%		- Should be alone in the market for many years
Procedures/ Patients				32,000	56,000	90,000	108,333	141,667	168,333		- Procedure growth should grow rapidly
Average Cost				\$2,500	\$2,500	\$2,500	\$3,000	\$3,000	\$3,000		- Premium pricing given the durability
Sales (\$MM)				\$80	\$140	\$225	\$325	\$425	\$505		
Total U.S. Submental Fat Market Sales (MM)				\$80	\$140	\$225	\$325	\$425	\$505		- Growth should be rapid given likely patient acceptance
%Growth					+75%	+61%	+44%	+31%	+19%		

Source: Cowen and Company



## Exhibit 23. Kythera Quarterly P&amp;L

KYTHERA - ESTIMATED QUARTERLY P&L BUILDUP (\$MM)															
	2012	2013E				2013E	2014E				2014E	2015E			
		Q1	Q2	Q3E	Q4E		Q1E	Q2E	Q3E	Q4E		Q1E	Q2E	Q3E	Q4E
ATX-101	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$10.0	\$15.0	\$20.0	\$35.0
International Royalty	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.0	\$2.0	\$3.0	\$4.0
License Revenue	19.7	\$0.0	\$0.0	\$0.0	0.0	0.0	\$10.0	\$10.0	\$10.0	\$10.0	40.0	\$10.0	\$10.0	\$10.0	\$10.0
<b>Total Revenues</b>	<b>\$19.7</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$10.0</b>	<b>\$10.0</b>	<b>\$10.0</b>	<b>\$10.0</b>	<b>\$40.0</b>	<b>\$21.0</b>	<b>\$27.0</b>	<b>\$33.0</b>	<b>\$49.0</b>
%Change	+52%	NM	NM	NM	NM	-100%	NM	NM	NM	NM	NM	+110%	+170%	+230%	+390%
Cost of Revenues	\$1.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.0	\$1.0	\$1.0	\$1.0	\$4.0	\$3.2	\$4.1	\$5.0	\$7.4
Total Gross Profit	\$17.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$9.0	\$9.0	\$9.0	\$9.0	\$36.0	\$17.9	\$23.0	\$28.1	\$41.7
Total Gross Margin	90.2%	NM	NM	NM	NM	0.0%	90.0%	90.0%	90.0%	90.0%	90.0%	85.0%	85.0%	85.0%	85.0%
SG&A	\$10.5	\$3.7	\$4.0	\$4.0	\$4.3	\$16.0	\$7.0	\$9.0	\$12.0	\$17.0	\$45.0	\$15.0	\$15.0	\$20.0	\$30.0
%Revenues	53.4%	NM	NM	NM	NM	NM	NM	NM	NM	NM	112.5%	71.4%	55.6%	60.6%	61.2%
R&D	\$43.2	\$10.0	\$7.8	\$8.5	\$8.7	\$35.0	\$10.0	\$11.0	\$12.0	\$2.0	\$35.0	\$11.0	\$11.0	\$11.0	\$12.0
%Revenues	219.4%	NM	NM	NM	NM	NM	NM	NM	NM	NM	87.5%	52.4%	40.7%	33.3%	24.5%
Operating Expenses	\$53.7	\$13.8	\$11.7	\$12.5	\$13.0	\$51.0	\$17.0	\$20.0	\$24.0	\$19.0	\$80.0	\$26.0	\$26.0	\$31.0	\$42.0
Operating Income	(\$35.9)	(\$13.8)	(\$11.7)	(\$12.5)	(\$13.0)	(\$51.0)	(\$8.0)	(\$11.0)	(\$15.0)	(\$10.0)	(\$44.0)	(\$8.2)	(\$3.1)	(\$3.0)	(\$0.3)
%Revenues															
Non-Operating Income															
Interest Income	(\$0.9)	\$0.0	\$0.0	\$0.0	(\$0.1)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Interest Expense	0.0	(0.4)	(0.6)	(0.6)	(0.7)	(2.2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Income	0.0	(0.1)	(0.1)	0.0	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Non-Operating Income	(\$0.9)	(\$0.45)	(\$0.5)	(\$0.6)	(\$0.7)	(\$2.3)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.3
Pre-Tax Income	(\$36.8)	(\$14.2)	(\$12.3)	(\$13.1)	(\$13.7)	(\$53.3)	(\$8.0)	(\$11.0)	(\$15.0)	(\$10.0)	(\$44.0)	(\$8.2)	(\$3.1)	(\$3.0)	(\$0.0)
%Revenues	-186.9%	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Income Taxes	\$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
Tax Rate	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%
Net Income - Operations	(\$36.8)	(\$14.2)	(\$12.3)	(\$13.1)	(\$13.7)	(\$53.3)	(\$8.0)	(\$11.0)	(\$15.0)	(\$10.0)	(\$44.0)	(\$8.2)	(\$3.1)	(\$3.0)	(\$0.0)
Non-Recurring Gains/Losses	\$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
Net Income - Reported	(\$36.8)	(\$14.2)	(\$12.3)	(\$13.1)	(\$13.7)	(\$53.3)	(\$8.0)	(\$11.0)	(\$15.0)	(\$10.0)	(\$44.0)	(\$8.2)	(\$3.1)	(\$3.0)	(\$0.0)
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
EPS (GAAP) - Fully Diluted	(\$2.62)	(\$0.77)	(\$0.67)	(\$0.71)	(\$0.74)	(\$2.90)	(\$0.38)	(\$0.52)	(\$0.71)	(\$0.48)	(\$2.10)	(\$0.37)	(\$0.14)	(\$0.13)	(\$0.00)
%Change	+161%	+46%	-292%	-94%	+175%	+11%	-51%	-21%	+0%	-36%	-28%	-3%	-74%	-81%	-100%
Non-Recurring Gains/Losses	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	(\$2.62)	(\$0.77)	(\$0.67)	(\$0.71)	(\$0.74)	(\$2.90)	(\$0.38)	(\$0.52)	(\$0.71)	(\$0.48)	(\$2.10)	(\$0.37)	(\$0.14)	(\$0.13)	(\$0.00)
Shares Outstanding (Fully Diluted)	14.1	18.3	18.4	18.4	18.4	18.39	21.0	21.0	21.0	21.0	21.00	22.0	22.0	22.0	22.00

Source: Cowen and Company



## Valuation Methodology & Investment 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.

### Company Specific Risks

Kythera may fail to achieve success in the ongoing U.S. and Canadian Phase III trials or successfully develop the product, once approved.





## Addendum

### STOCKS MENTIONED IN IMPORTANT DISCLOSURES

Ticker	Company Name
KYTH	Kythera Biopharmaceuticals Inc

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### COWEN AND COMPANY RATING DEFINITIONS



### Cowen and Company Rating System effective May 25, 2013

**Outperform (1):** The stock is expected to achieve a total positive return of at least 15% over the next 12 months

**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

### Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013

**Buy** – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

**Sell** – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

**Hold** – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

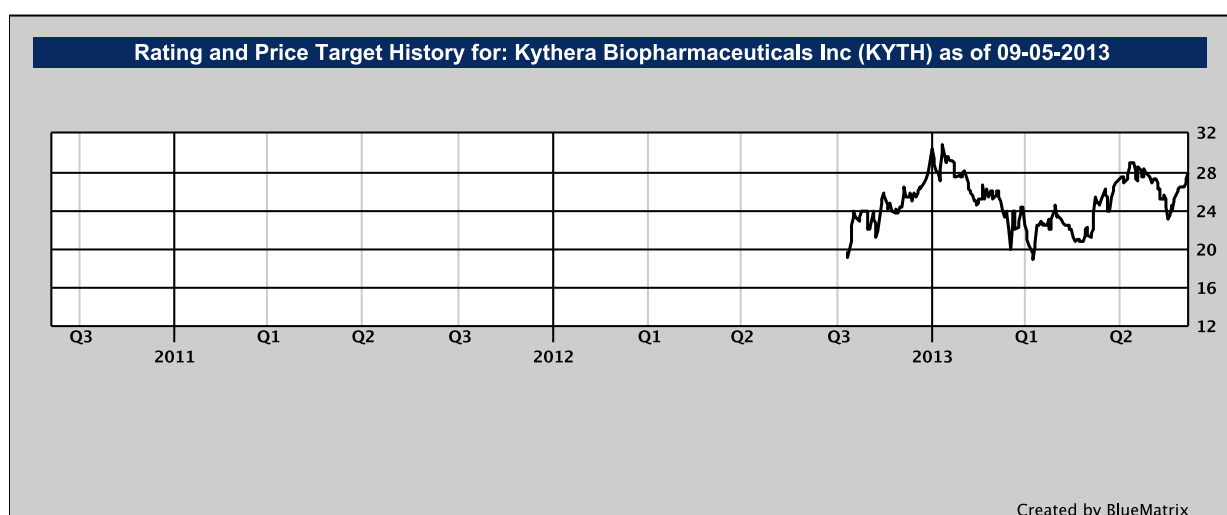
### COWEN AND COMPANY RATING ALLOCATION

*Distribution of Ratings/Investment Banking Services (IB) as of 06/30/13*

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	380	58.37%	48	12.63%
Hold (b)	247	37.94%	2	0.81%
Sell (c)	24	3.68%	1	4.17%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

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Legend for Price Chart:

I = Initiation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | T = Terminated Coverage | \$xx = Price Target | NA = Not Available