June 10, 2013

Ambit Biosciences

(AMBI-NASDAQ)

Stock Rating: Outperform
Industry Rating: Outperform

Biotechnology

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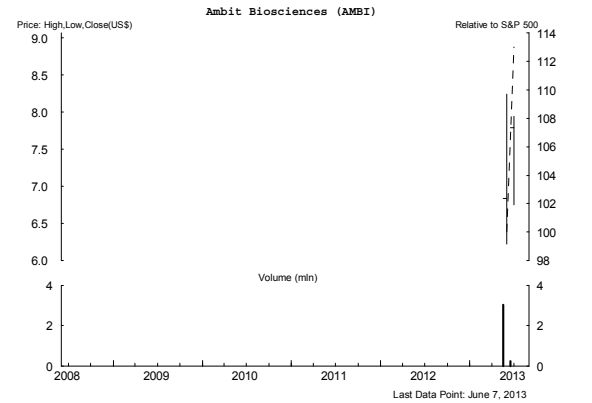
Initiating With Outperform

Securities Info

Price (7-Jun)	**$7.79**	**Target Price**	**$10**
52-Wk High/Low	$8/$6	Dividend	--
Mkt Cap (mm)	$138	Yield	--
Shs O/S (mm, BASIC)	17.7	Float O/S (mm)	2.5
Options O/S (mm)	na	ADVol (30-day, 000s)	217

Price Performance



Investment Thesis

We're initiating coverage of Ambit Biosciences with an Outperform rating and $10 price target. Our favorable rating is driven primarily by expectations for the company's FLT-3 inhibitor in acute myeloid leukemia (AML) and prospects for potential accelerated approval filing in patients with relapsed/refractory disease. While current valuation reflects expectations for more protracted phase 3 development and an overall survival (OS) hurdle, we believe that a credible upside case exists around filing for accelerated approval on a composite complete response (CRc) rate of ~50%. While FDA has raised questions historically regarding value of response rate data as a surrogate for clinical benefit in AML we believe that unmet need in Ambit phase 2 trials is greater and that a more favorable regulatory environment exists today.

Forecasts

We estimate 2013-2018 per share losses of $(1.92), $(2.03), $(2.18), $(2.31), $(1.25) and $(0.43), respectively. Our forecast calls for Ambit to become profitable in 2019 with EPS of $0.35, increasing to $0.84 in 2020.

Valuation

Our $10/share price target is supported by a sum-of-the-parts, probability adjusted NPV, which estimates value of quizartinib in the US at $7/share, assuming 60% likelihood of success, and in the EU at $3/share, assuming 55% likelihood of success.

Recommendation

We rate AMBI shares Outperform.

Valuation/Financial Data

(FY-Dec.)	2011A	2012A	2013E	2014E
EPS GAAP	NA	NA	-$1.92	-$2.03
P/E			nm	nm
First Call Cons.				
FCF	NA	NA	NA	-$2.32
P/FCF			na	nm
EBITDA ($mm)	-$34	-$23	-$27	-$38
EV/EBITDA			nm	nm
Rev. ($mm)	$24	$18	$7	$0
EV/Rev			20.1x	nm

Quarterly EPS	**1Q**	**2Q**	**3Q**	**4Q**
2012A	NA	NA	NA	NA
2013E	NA	-$0.37	-$0.44	-$0.46

Balance Sheet Data (31-Mar)

Net Debt ($mm)	-$5	TotalDebt/EBITDA	nm
Total Debt ($mm)	$3	EBITDA/IntExp	na
Net Debt/Cap.	15.7%	Price/Book	0.0x

Notes: Quarterly EPS may not sum due to share count. All values in US$.

Source: BMO Capital Markets estimates, Bloomberg, Thomson Reuters, and IHS Global Insight.

Investment Thesis

We are initiating coverage of Ambit Biosciences with an Outperform rating and $10/share price target. Our target price reflects a conservative base-case scenario for AML drug quizartinib, involving a full phase 3 development plan in second/third line FLT-ITD+ patients and with ultimate market opportunity constrained to this population.

Upside opportunity to this base-case scenario, and option value, could be realized by YE13 if a path to accelerated approval filing is provided by FDA, if response rate is ultimately accepted as an endpoint for conditional approval, and if use is broadened beyond FLT3-ITD+ patients. Our review of prior FDA documents for other AML drug candidates, more recent FDA actions around accelerated drug approvals in oncology, and strong CRc data for quizartinib suggest a reasonable possibility of this upside opportunity being realized.

In addition, peak sales estimates of ~$175 million could easily double or triple, with off-label use of weaker FLT3 inhibitors as a guide, and timelines to market availability could also dramatically improve from 2017 if an accelerated approval filing were pursued by year-end 2013 or early 2014.

Key Investment Highlights

- Ambit has a potential best-in-class FLT3 inhibitor for patients with acute myeloid leukemia (AML) that have failed available treatment options.
- Composite complete response (CRc) rates of 46% overall in AML patients relapsed/refractory to one or more prior therapies appears favorably differentiated from rates of 3-4% seen with other tyrosine kinase inhibitors (TKIs) with FLT3 activity.
- While CRc has not been fully validated as a surrogate of ultimate clinical benefit in AML we believe that this level of response has been associated with a "bridge to transplant" in ~35% of patients treated with quizartinib in phase 2 and with longer overall survival (OS) than predicted by historical data.
- We believe that the primary liability of quizartinib in terms of QTc prolongation is being mitigated by dose reduction, without compromise of efficacy and do not view this as a major impediment to approval or ultimate commercial adoption, given the prominence of this effect with other TKI's.
- Ultimately we view the quizartinib end of phase 2 (EOP2) meeting in the fall as the key catalyst for AMBI shares and believe that significant option value exists to potential agreement on a path to accelerated approval filing.
- Quizartinib peak sales estimate of $175 million supports our $10/share probability adjusted NPV, and could increase several fold if use is extended beyond FLT3-ITD positive patients and if timelines do accelerate beyond those currently contemplated around a full phase 3 study.

Valuation

Our $10/share price target is supported by a sum-of-the-parts, probability adjusted NPV, which estimates value of quizartinib in the US at $7/share assuming 60% likelihood of success and in the EU of $3/share assuming 55% likelihood of success.

Exhibit 1: Ambit Comps

CANCER COMPANIES						
Company	**Ticker**	**Market Cap (M)**	**Cash (M)**	**EV (M)**	**Therapeutic Focus**	**Stage of Development**
ArQule	ARQL	$148.8	$79.3	$71.2	Oncology	Phase 3
Array BioPharma	ARRY	596.1	109.2	581.4	Oncology	Phase 2
Astex Pharmaceuticals	ASTX	428.0	138.2	289.8	Oncology	Market
AVEO Oncology	AVEO	123.9	189.7	(39.8)	Oncology	Phase 3
Celldex Therapeutics	CLDX	1,154.0	77.6	1,089.0	Oncology	Phase 3
Clovis Oncology	CLVS	1,908.2	144.1	1,764.1	Oncology	Phase 2
Curis	CRIS	273.3	41.1	232.2	Oncology	Phase 2
Cyclacel Pharmaceuticals	CYCC	34.1	17.8	16.3	Oncology	Phase 3
Exelixis	EXEL	882.2	484.6	732.9	Oncology	Market
Geron	GERN	146.2	96.3	49.9	Oncology	Phase 2
Halozyme Therapeutics	HALO	752.3	99.9	683.5	Oncology	Phase 2
Infinity Pharmaceuticals	INFI	909.6	326.0	583.5	Oncology	Phase 2
Keryx Biopharmaceuticals	KERX	627.3	20.2	607.1	Oncology	Phase 3
Merrimack Pharmaceuticals	MACK	509.0	37.7	471.3	Oncology	Phase 2
NewLink Genetics	NLNK	481.9	21.7	467.3	Oncology	Phase 2
Oncolytics Biotech	ONCY	204.3	21.3	183.0	Oncology	Phase 3
Peregrine Pharmaceuticals	PPHM	225.5	24.4	201.1	Oncology	Phase 2
Sunesis Pharmaceuticals	SNSS	257.0	76.6	204.4	Oncology	Phase 3
Synta Pharmaceuticals	SNTA	309.7	100.6	221.5	Oncology	Phase 3
Spectrum Pharmaceuticals	SPPI	485.5	146.6	338.9	Oncology	Market
Stemline Therapeutics	STML	119.3	3.1	118.1	Oncology	Phase 2
Threshold Pharmaceuticals	THLD	311.0	17.3	293.7	Oncology	Phase 3
Tesaro	TSRO	1,309.0	198.6	1,110.4	Oncology	Phase 3
Verastem	VSTM	189.0	56.6	132.5	Oncology	Phase 1
ZIOPHARM Oncology	ZIOP	161.5	95.3	66.2	Oncology	Phase 3
Mean		$501.9		$418.8		
Median		311.0		289.8		
Ambit Biosciences	AMBI	$134.5	$92.0	$45.6		

AMBIT BIOSCIENCES SUM-OF-THE-PARTS					
Target	**Indication**	**Launch Year**	**Peak Sales ($M)**	**Probability**	**NPV ($M)**
Quizartinib - U.S.	AML	2017	$75.4	60%	$122.5
Quizartinib - EU	AML	2017	24.6	55%	55.8
Total					$178.3

Source: Company reports, Thomson Reuters, and BMO Capital Markets.

Overview

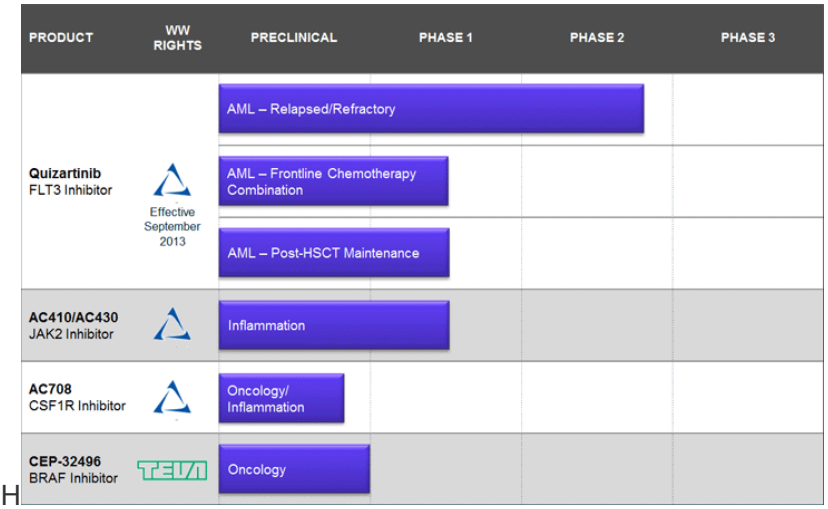
Ambit Biosciences is a clinical stage biopharmaceutical company focused on the discovery, development and commercialization of small-molecule kinase inhibitors for oncology, autoimmune and inflammatory disease indications. Ambit's core competency is its ability to discover, optimize and develop drug candidates that are highly selective and potent against specific kinases.

Using a proprietary 8,000-compound chemical library, Ambit has developed three drug candidates, each for a validated kinase target. The lead candidate, quizartinib, (formerly AC220) is a selective inhibitor of FLT3 and is currently in phase 2b trials in patients with relapsed/refractory AML who express a genetic mutation in FLT3. In a single-arm phase 2 clinical trial in relapsed/refractory AML patients, quizartinib demonstrated superior single-agent activity as compared to reported results of clinical trials with other kinase inhibitors with FLT3 activity. Ambit plans to initiate a randomized, comparative phase 3 trial in FLT3-ITD positive relapsed/refractory AML patients by early 2014. The company also plans to develop quizartinib in other AML therapeutic settings and irrespective of FLT3-ITD status, including frontline use in newly diagnosed AML patients in combination with chemotherapy, continuous single-agent maintenance therapy, and maintenance following HSCT.

Ambit is considering strategic partnership as a means to accelerate quizartinib's clinical development and maximize its market potential. Ambit plans to retain commercial rights to quizartinib in North America and enter into collaborative arrangements for quizartinib's commercialization outside North America.

Ambit's second drug candidate, AC410, is a small molecule JAK2 inhibitor that has potential utility for the treatment of autoimmune and inflammatory diseases. Ambit's third drug candidate, AC708, is a potent and selective small molecule inhibitor of CSF1R, a receptor tyrosine kinase. AC708 is in preclinical studies and has potential utility in oncology, autoimmune, and inflammatory diseases.

Exhibit 2: Ambit Pipeline



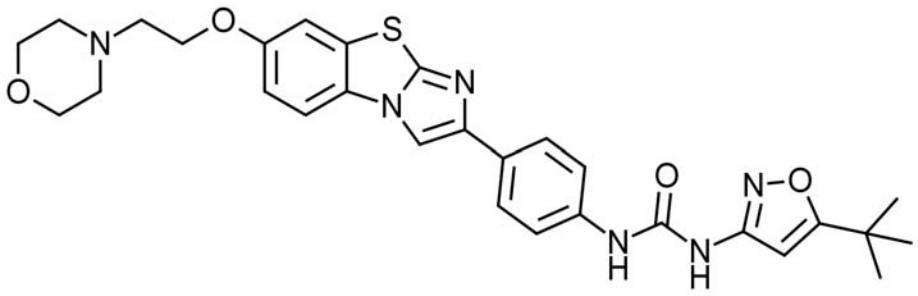
0H1H2H3H

Source: Ambit Biosciences.

Ambit's Leading Asset - Quizartinib

Ambit's lead drug candidate, quizartinib (formerly AC220), is a once-daily, orally-administered, potent and selective inhibitor of FMS-like tyrosine kinase 3 (FLT3), which is a validated target in the treatment of AML.

Exhibit 3: Structure of Quizartinib



Source: BMO Capital Markets.

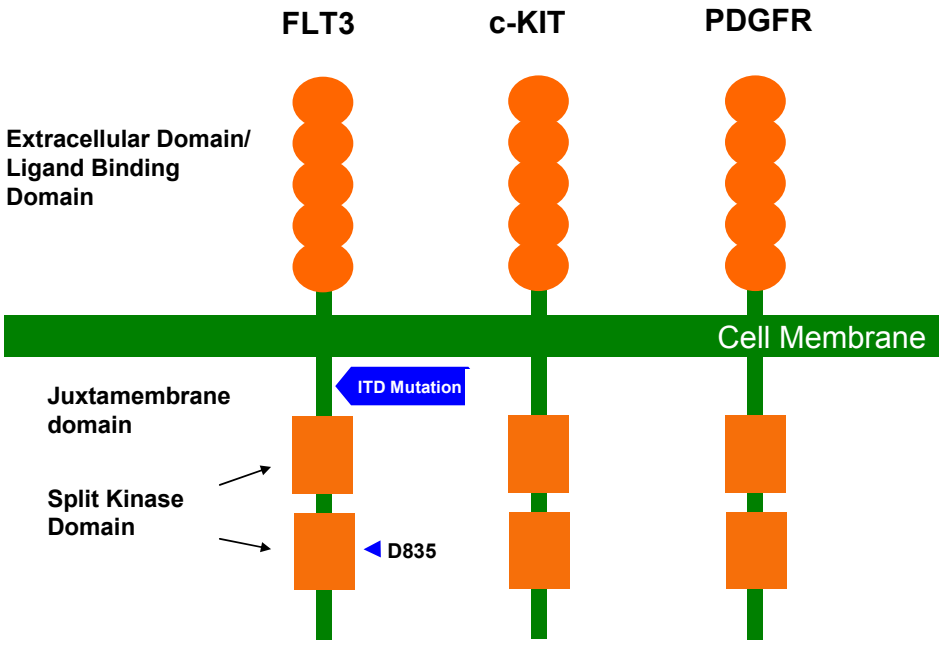
Acute myeloid leukemia is an aggressive hematologic malignancy. (A detailed overview of AML is presented under the section titled *Primer on AML and Its Treatment Options*). While a complete remission is achievable in some AML patients after traditional induction chemotherapy, the majority of these patients will relapse and eventually succumb to the disease. Rates of relapse are particularly high for one group of patients who have mutations in the FLT3 gene.

The Role of FLT3 in AML

FMS-like tyrosine kinase-3 (FLT3) and its ligand, FL, are important in hematopoietic cell progenitor proliferation and differentiation (blood cell production). FLT3 belongs to the type III receptor tyrosine kinase family, which also includes KIT and platelet-derived growth factor receptor (PDGFR). Structurally, the type III receptor tyrosine kinases are characterized by a transmembrane domain, a juxtamembrane domain, a split kinase domain containing a kinase insert region, and a C-terminal tail.

FLT3 is expressed on hematopoietic progenitor cells (immature blood cells). Its endogenous ligand is FLT3 ligand (FL), a growth factor for immature myeloid cells and stem cells. Upon binding to the ligand, FLT3 dimerizes and undergoes auto-phosphorylation, which activates the intracellular tyrosine kinase domain and initiates downstream signaling events through phosphatidylinositol 3-kinase (PI3K), AKT, mitogen-activated protein kinase (MAPK), and signal transducer and activator of transcription 5 (STAT5).

Exhibit 4: Structural Features of Type III Receptor Tyrosine Kinases



Source: BMO Capital Markets, adapted from Wadleigh M *et al. Blood* 2005;105:22-30.

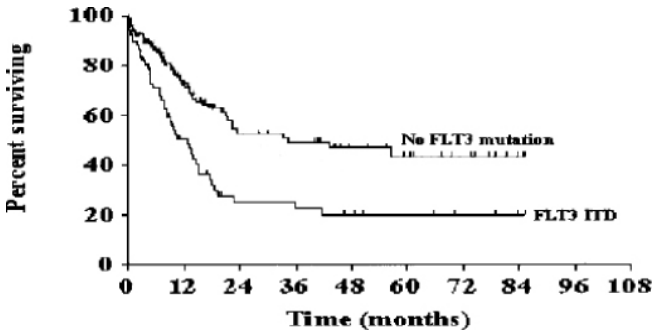
Mutations within the FLT3 gene have been detected in approximately one-third of AML patients and represent one of the most frequently identified genetic alterations in AML. Two major classes of activating FLT3 mutations have been identified: tyrosine kinase domain (TKD) point mutations, occurring in approximately 5%-10% of AML cases, and internal tandem duplications (ITD), occurring in approximately 20%-25% of AML cases. FLT3-ITD mutations are repeats of 5 to 40 or more amino acids in FLT3's juxtamembrane region. The FLT3-ITD mutations lead to constitutive activation of the kinase, leading to aberrant activation of multiple

downstream pathways such as PI3K/AKT, MAPK/ERK, and STAT5 pathways. Thus FLT3-ITD may confer growth factor-independent proliferation and survival of immature blood cells, leading to aggressive proliferation of blasts that lack the ability to differentiate into normal blood cells. These blasts spread more aggressively and grow back more rapidly following chemotherapy.

The FLT3-ITD molecule is also hyper responsive to FLT3 ligand and this becomes relevant in the context of chemotherapy, as chemotherapy has been shown to produce a surge in FLT3 ligand levels.

The FLT3-ITD mutation is associated with a particularly poor prognosis in AML. Patients harboring the FLT3-ITD mutations, also referred to as FLT3-ITD positive patients, typically respond to induction chemotherapy, but they tend to relapse more quickly and at a higher rate, resulting in a much lower overall survival rate compared to patients who do not have the mutation (FLT3-ITD negative patients). As shown in Exhibit 5, the estimated OS for subjects with a normal karyotype and a FLT3-ITD is estimated to range from 6 to 12 months, and median survival for patients with FLT3-ITD after first relapse has been reported to be < 5 months.

Exhibit 5: Overall Survival for Patients With Normal Cytogenetics Stratified by Absence (N=125) or Presence (N=67) of the FLT3-ITD Mutation



Source: Ambit Biosciences, adopted from Fröhling et al, Blood. 2002 100: 4372-4380.

Prognosis can further depend on whether an ITD is present on one or both alleles. Whitman and colleagues reported in *Cancer Research* a comparison of overall survival for newly diagnosed AML subjects with:

- a single copy of the FLT3 gene mutated to a FLT3-ITD
- two copies of the FLT3 gene, one of which contains an ITD
- two wild type FLT3 genes

Subjects with two FLT3-ITD alleles had the shortest overall survival (7 months), compared to those with one or two wild type FLT3 alleles (46 months).

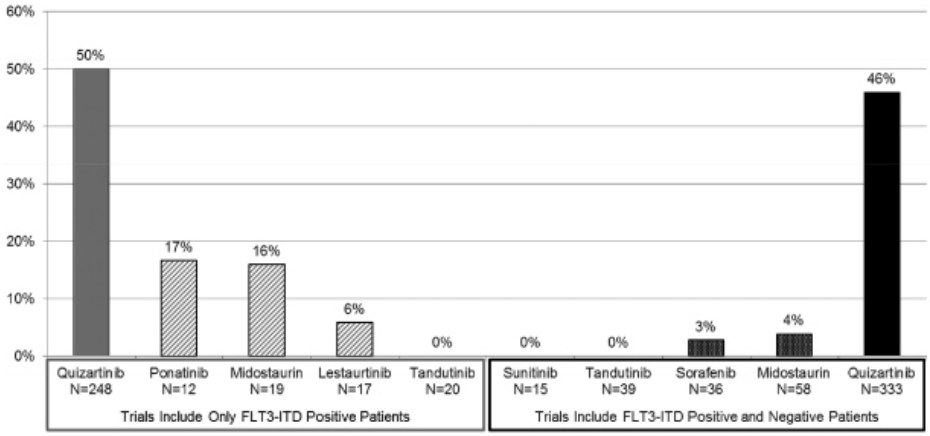
The absolute prognosis of patients with FLT3 gene aberrations can also be modulated by the presence or absence of other genetic aberrations. For example the presence of a NPM1 mutation, which is generally associated with good prognosis, improves the prognosis of a background FLT3 alteration.

Quizartinib Overview

Ambit designed quizartinib as a selective and potent inhibitor of FLT3 for the treatment of AML. Besides quizartinib, six kinase inhibitors with activity against FLT3 have been evaluated as single agents in AML patients so far. These kinase inhibitors include Pfizer's SUTENT (sunitinib), Cephalon's CEP-701 (lestaurtinib), Novartis' PKC-412 (midostaurin), Millennium Pharmaceuticals' MLN-518 (tandutinib), Bayer AG and Onyx Pharmaceuticals' NEXAVAR (sorafenib) and Ariad Pharmaceuticals' ICLUSIG (ponatinib). In most cases, these kinase inhibitors were developed to target other kinases and were not initially developed to target FLT3. Nevertheless, because of the lack of treatment options for AML, and particularly for FLT3-ITD positive AML, commercially-available kinase inhibitors such as SUTENT and NEXAVAR are often used off-label despite the relatively low response rates generated by these drugs. PKC-412 (midostaurin) is the only kinase inhibitor currently in a phase 3 clinical trial in newly diagnosed FLT3-ITD positive patients with AML.

Ambit believes that the increased specificity for FLT3 and decreased activity on other kinases may make quizartinib a better therapeutic agent in AML than the other kinase inhibitors. Ambit compared quizartinib's phase 2 clinical trial data with historical data from phase 1 and phase 2 clinical trials of the other kinase inhibitors in relapsed/refractory AML patients. According to this comparison, as shown in Exhibit 6, the effectiveness of quizartinib in reducing bone marrow blasts seems to be higher than that of the other kinase inhibitors.

Exhibit 6: Composite Complete Response (CRc) Rates (< 5% Bone Marrow Blast) in Monotherapy Trials of Various Kinase Inhibitors in Relapsed/Refractory AML

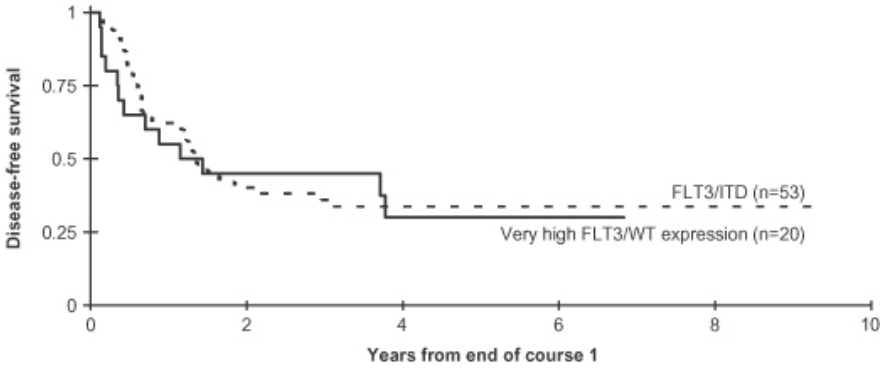


Source: Ambit Biosciences.

More recently, clinical evidence from a pediatric study suggests that some FLT3-ITD negative AML patients over-express the normal, wild-type FLT3 receptor and that progression of disease in these patients may in part be driven by heightened FLT3 signaling, resulting in an aggressive proliferation of blasts similar to that seen in FLT3-ITD positive patients. (See Exhibit 7.) In this study, it was demonstrated that FLT3-ITD negative patients who were in the top quartile of FLT3 over-expression had a prognostic outcome that was as poor as that of the FLT3-ITD

positive patients. These data suggest that FLT3-ITD negative AML patients with FLT3 over-expression may also benefit from treatment with a FLT3 inhibitor.

Exhibit 7: Overall Survival of High Expressers of Wild-type FL3 and FLT3-ITD Patients



Source: Ambit Biosciences, adopted from Brown et al, Blood (ASH Annual Meeting Abstracts) 2008 112: Abstract 147.

Quizartinib Phase 2 Clinical Development

Ambit's once-daily, orally-administered FLT3 inhibitor, quizartinib, is currently in phase 2b clinical development for relapsed/refractory AML. Data from a single-arm, 333-patient phase 2 clinical trial, AC220-002, were reported at the American Society of Hematology (ASH) meeting in December 2012. When compared to reported results of clinical trials with other kinase inhibitors with FLT3 activity, quizartinib demonstrated superior single-agent activity in relapsed/refractory AML patients.

The multi-center, open-label phase 2 trial, AC220-002, evaluated the efficacy and safety of quizartinib as a monotherapy for relapsed/refractory AML. The trial enrolled a total of 333 patients over a two-year period (November 2009 to November 2011) from the US, Canada, and select European countries. At the time of enrollment, 248 patients had the FLT3-ITD mutation, 84 patients did not have the FLT3-ITD mutation, and 1 patient had an unknown status for the mutation. Patients received one of three doses of quizartinib: 200 mg/day (17 patients), 135 mg/day (166 patients) and 90 mg/day (150 patients).

Patients enrolled in the phase 2 trial consisted of two distinct cohorts, and Ambit believes they represent patient populations that can be effectively treated with quizartinib. Cohort 1 were elderly patients (≥ 60 years of age; median 69 yr; max 86 yr) who were primary refractory to first-line chemotherapy or who relapsed after one first-line chemotherapy regimen with a complete remission of less than 12 months. Cohort 2 were younger patients (≥ 18 years of age; median 51 yr; max 77 yr) who had received more extensive prior therapy than those enrolled in Cohort I and were relapsed or refractory after either one second-line (salvage)-chemotherapy regimen or an hematopoietic stem cell transplant (HSCT).

The phase 2 trial occurred in two stages. After the first 62 patients (including 58 FLT-ITD positive patients) had received at least one cycle of treatment, an interim data analysis was conducted, and this portion of the trial was referred to as the exploratory stage. The second data analysis was based on the remaining 271 patients (including 190 FLT3-ITD positive patients and 1 patient with unknown status). Exhibit 8 shows a full breakdown of enrolled patients by cohort, FLT3-ITD status, and stage.

Exhibit 8: Number of Patients Enrolled in Quizartinib Phase 2 Trial

	Cohort 1 (≥60 yr; median 69, max 86)		Cohort 2 (≥18 yr; median 51, max 77)		Total
	FLT3-ITD positive	FLT3-ITD negative	FLT3-ITD positive	FLT3-ITD negative	
Exploratory Stage	22	2	36	2	62
Confirmatory Stage	90	43*	100	38	271
Total	112	45*	136	40	333
* includes one patient of unknown FLT3-ITD status.					

Source: Ambit Biosciences and BMO Capital Markets.

The co-primary endpoints of the phase 2 trial were the composite complete response rate (CRc, which is a sum of CRp, CRi, and CR) and the complete response rate (CR). The secondary endpoints of the phase 2 trial included transplantation rate (proportion of patients who become eligible for an HSCT after treatment with quizartinib, also referred to as bridged to an HSCT), overall survival, duration of response, disease-free survival, and overall response rate, which includes partial response rate (PR). The response criteria for CR, CRp, CRi and PR are listed in Exhibit 9.

Exhibit 9: Response Criteria for CR, CRp, Cri, and PR

Response	Criteria
CR	Reduction in bone marrow blasts to < 5% of bone marrow cells with full hematological recovery
CRp	Reduction in bone marrow blasts to < 5% of bone marrow cells with complete neutrophil recovery but incomplete platelet recovery. CRp describes a subset of patients with CRi.
CRi	Reduction in bone marrow blasts to < 5% of bone marrow cells with incomplete recovery of either neutrophils or platelets

PR	Reduction in bone marrow blasts to between 5% and ≤ 25% of bone marrow cells and ≥ 50% reduction in the bone marrow blasts from baseline

Source: Ambit Biosciences and BMO Capital Markets.

Although there were two stages for the phase 2 trial, Ambit has reported that the data for the primary and secondary endpoints from the exploratory stage and the confirmatory stage are consistent with each other, and data from the two stages can be combined for data analysis.

The rates of various responses, including CRc, CR, CRp, Cri, and PR, for the phase 2 trial were summarized in Exhibit 10. The rate of CRc was 50.4% for FLT3-ITD positive patients and 33.3% for FLT3-ITD negative patients. The majority of the CRc cases were those of CRi: 44.8% of FLT3-ITC positive patients and 27.4% of FLT3-ITC negative patients achieved a CRi. The rates for CR and CRp were more than 10x lower than the rate of CRi, and the rates were similar between FLT-ITD positive and negative patients. Partial response was achieved in 24.6% of FLT3-ITC positive patients and 11.9% of FLT3-ITC negative patients.

Exhibit 10: Response Rates, Duration of CRc, and Overall Survival of Quizartinib's Phase 2 Trial

	FLT3-ITD positive						FLT3-ITD negative					
	Cohort 1		Cohort 2		Combined		Cohort 1		Cohort 2		Combined	
N=	112		136		248		44		40		84	
CRc	63	56.3%	62	45.6%	**125**	**50.4%**	16	36.4%	12	30.0%	**28**	**33.3%**
CR	3	2.7%	5	3.7%	**8**	**3.2%**	2	4.5%	1	2.5%	**3**	**3.6%**
CRp	4	3.6%	2	1.5%	**6**	**2.4%**	1	2.3%	1	2.5%	**2**	**2.4%**
CR(i)	56	50.0%	55	40.4%	**111**	**44.8%**	13	29.5%	10	25.0%	**23**	**27.4%**
PR	23	20.5%	38	27.9%	**61**	**24.6%**	4	9.1%	6	15.0%	**10**	**11.9%**
CRc+PR	86	76.8%	100	73.5%	**186**	**75.0%**	20	45.5%	18	45.0%	**38**	**45.2%**

CRc duration, median (wks, [range])	12.1 [0.1-58.9]	10.6 [0.1-102.1+]	10.8 [2.0-57.1]	7.0 [0.1-8.1]
OS, median (weeks)	25.4	24	19.1	25.1

+ inidcates that a patient is still being censored for response

Source: Ambit Biosciences and BMO Capital Markets.

Importantly, approximately half of the FLT3-ITD positive patients within both cohorts (131 of 248) were refractory to their last prior therapy. Of these refractory patients, 74% achieved at least a PR and 48% achieved a CRc with quizartinib.

Ambit believes that some of the responses observed in the FLT3-ITD negative patients can be attributed to the 10% ITD level cut-off threshold used to identify FLT3-ITD positive patients in their current diagnostic test. In the test, patients with less than 10% ITD mutation were classified as ITD negative. A more sensitive test with a lower ITD expression detection threshold may be able to identify as ITD positive certain patients currently identified as FLT3-ITD negative. Ambit believes that patients with low levels of ITD expression (<10%) could respond similarly as the FLT3-ITD positive patients. In light of the finding, Ambit is carrying out additional work to validate a lower cut-off on the diagnostic test. Nevertheless, another

possibility is that the FLT3-ITD mutation may also respond to quizartinib and Ambit is evaluating the potential use of quizartinib in that patient population as an opportunity for expansion of the target population for quizartinib in the future.

For FLT3-ITD positive patients, the median time to achieve CRc was 4.3 weeks, and the median duration of CRc, defined as the time from achieving CRc to relapse (bone marrow blasts rising above 5%), was 12.1 weeks in Cohort 1 and 10.6 weeks in Cohort 2. (See Exhibit 10.) For FLT3-ITD negative patients, the median duration of CRc was shorter than that of the FLT3-ITD positive patients, and was 10.8 weeks in Cohort 1 and 7.0 weeks in Cohort 2.

It is worth noting that the duration of response data described above may be an under-estimation due to the censoring of data, which is a standard technique in leukemia trial data analysis. For a patient who is bridged to HSCT, which tends to occur very quickly after a response to quizartinib is achieved, the patient's duration of response is censored and those who are last known as responders are not counted as an event of relapse. This potentially impacts the duration of response due to censoring at the time of an HSCT. Those bridged to an HSCT without a documented relapse are no longer considered at risk for relapse and therefore Ambit cannot determine whether they could have contributed to an overall longer duration of response.

The mean duration of treatment for FLT3-ITD positive patients achieving either a CRc or PR, referred to as responders, was 21.8 weeks in Cohort 1, and 15.9 weeks in Cohort 2, as shown in Exhibit 11. The mean duration of treatment for FLT3-ITD negative patients who were responders was 28.7 weeks in Cohort 1 and 10.0 weeks in Cohort 2. Similar to duration of response, duration of treatment can also be potentially affected by patients being bridged to an HSCT, because treatment with quizartinib is discontinued prior to transplantation.

Exhibit 11: Duration of Treatment in Quizartinib's Phase 2 Trial

	FLT3-ITD Positive								FLT3-ITD Negative							
	Cohort 1 N=112				Cohort 2 N=136				Cohort 1 N=44				Cohort 2 N=40			
Duration of treatment (weeks)	Mean	Median	Min	Max	Mean	Median	Min	Max	Mean	Median	Min	Max	Mean	Median	Min	Max
Responders (CRc or PR)	21.8	17.5	2.0	70.6 +	15.9	10.0	2.7	108.1 +	28.7	24.0	5.9	77.0	10.0	8.6	4.0	21.9
Non-responders	5.0	4.4	0.1	12.4	6.9	5.0	0.3	23.3	7.1	4.1	1.1	32.6	9.7	6.7	1.0	38.1

+ indicates that a patient is still receiving treatment with quizartinib

Source: Ambit Biosciences and BMO Capital Markets.

This high level of response allowed many patients to be bridged to an HSCT. Of the 248 FLT3-ITD positive patients, 11 out of 112 (9.8%) patients in Cohort 1 and 47 out of 136 (34.6%) patients in Cohort 2 were bridged to an HSCT. Of the 84 FLT3-ITD negative patients, 1 out of 44 (2.3%) in Cohort 1 and 14 out of 40 (35.0%) in Cohort 2 were bridged to an HSCT.

Cohort 2 patients may have benefited the most from the treatment. These patients received quizartinib as a third line of therapy or as a therapy after a prior HSCT. These patients would not have been eligible to receive an HSCT given their high bone marrow blast percentage while

on their previous therapy. Therefore the level of bone marrow blast reduction and duration of response to quizartinib may have contributed to improved eligibility for HSCT.

Exhibit 12 outlines the number of FLT3-ITD positive and negative patients who were bridged to an HSCT, as well as overall survival (OS) based on whether or not a patient was bridged to an HSCT. Cohort 2 patients were more likely to be bridged to an HSCT than Cohort 1 patients, probably because patients in Cohort 2 were, on average, younger than patients in Cohort 1, and younger patients are more likely to be eligible for an HSCT.

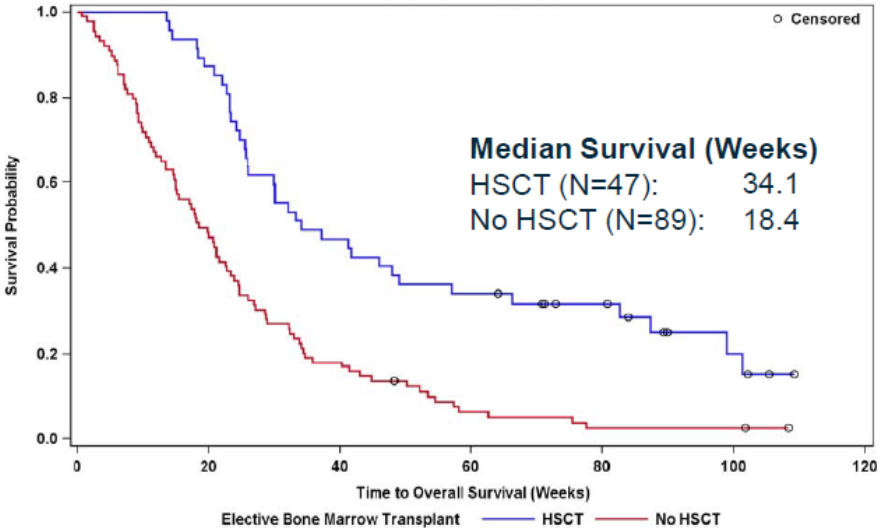
Exhibit 12: Overall Survival for FLT3-ITD Positive Patients With or Without an HSCT

	FLT3-ITD Positive		FLT3-ITD Negative	
	Cohort 1	Cohort 2	Cohort 1	Cohort 2
	N = 112	N = 136	N=44	N=40
# (%) Bridged to an HSCT	11 (9.8%)	47 (34.6%)	1 (2.3%)	14 (35%)
Median OS (weeks), [range]	25.4 [0.4-96.0+]	24.0 [0.7-109.1+]		25.1
Median OS if bridged to an HSCT (weeks), [range]	32.7 [12.7-93.0+]	34.1 [13.6-109.1+]		not yet reached
Median OS if not bridged to an HSCT (weeks), [range]	24.9 [0.4-96.0+]	18.4 [0.7-108.3+]		19.2

Source: Ambit Biosciences and BMO Capital Markets.

There was an improvement in the overall survival in patients who received HSCT relative to those that did not. Exhibit 13 depicts the overall survival curves for two groups of FLT3-ITD positive Cohort 2 patients: those who were bridged to HSCT and those who were not. The survival rate is clearly higher in patients who were bridged to HSCT, and the one-year survival rate in patients who were bridged to an HSCT was 36.2% (17 out of 47 patients). The median OS was 34.1 weeks in those who received an HSCT compared to 18.4 weeks in those who did not receive an HSCT.

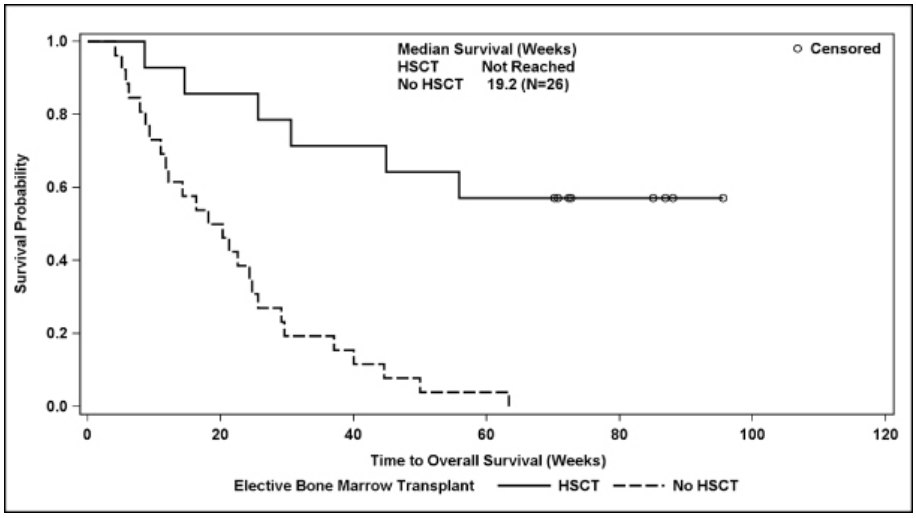
Exhibit 13: Overall Survival of FLT3-ITD Positive Patients in Cohort 2



Source: Ambit Biosciences.

A similar trend of survival benefit in patients receiving an HSCT was observed in FLT3-ITD negative patients in Cohort 2. As shown in Exhibit 14, the median overall survival for Cohort 2 patients who were not bridged to an HSCT was 19.2 weeks, whereas the median overall survival for those who were bridged to an HSCT has yet to be reached as of September 2012.

Exhibit 14: Overall Survival for FLT3-ITD Negative Patients in Cohort 2



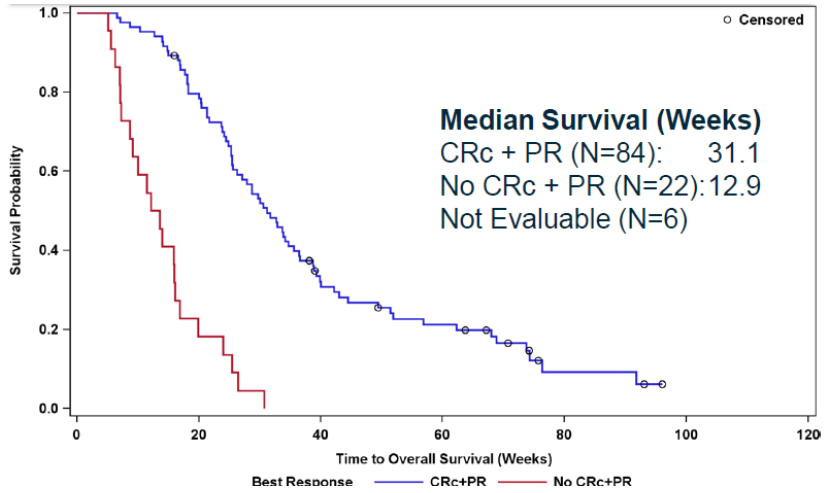
Source: Ambit Biosciences.

Comparison of overall survival data reported for quizartinib with that reported historically for similar AML patients suggests a potential improved outcome for patients receiving quizartinib. FLT3-ITD positive patients who are relapsed or refractory have very poor response rates to additional therapy and poor overall survival. Indeed, according to a study conducted by researchers at the University of Texas M.D. Anderson Cancer Center on 109 FLT3-ITD

positive patients who were treated from 1995-2004, the median overall survival for FLT3-ITD positive patients who were relapsed after their first therapy was **13.0 weeks**. In quizartinib's phase 2 trial, FLT3-ITD positive patients in Cohort 1, who were elderly and relapsed after one first-line chemotherapy treatment or were refractory to first-line chemotherapy treatment, had a median overall survival of **25.4 weeks**. The overall survival of FLT3-ITD negative patients in Cohort 1 was 19.1 weeks.

The overall survival in Cohort 1's FLT3-ITD positive patients could be further analyzed by dividing the patients into two groups: those who achieved a PR or CRc to quizartinib, and those who did not. Out of the 112 FLT3-ITD positive patients in Cohort 1, 106 patients lived long enough (i.e., at least 28 days) to be assessed for their response to quizartinib treatment. As shown in Exhibit 15, if a patient achieved a CRc or PR to quizartinib, the median overall survival was 31.1 weeks, compared to a median overall survival of 12.9 weeks in those who did not achieve at least a PR to quizartinib.

Exhibit 15: Differential Outcome in Overall Survival of FLT3-ITD Positive Patients in Cohort 1



Source: Ambit Biosciences.

Overall survival in Cohort 2's FLT3-ITD positive patients can also be similarly analyzed by comparing to data from historical studies, although there are few publications regarding AML patients in their third line of therapy. According to a study of 594 AML patients (both FLT3-ITD positive and negative) treated from 1980 to 2004 undergoing their third line of treatment published by researchers at the University of Texas M.D. Anderson Cancer Center, the median overall survival for those patients was **1.5 months**. In contrast, for Cohort 2 patients in the quizartinib phase 2 trial (patients who were relapsed after two lines of therapy or who were relapsed or refractory to an HSCT), the median overall survival was **24.0 weeks** in FLT-ITD positive patients and **25.1 weeks** in FLT-ITD negative patients.

Patients who had an overall survival of greater than 12 months are referred to as long-term survivors. Of all 333 patients (irrespective of FLT3-ITD status) in the phase 2 clinical trial, 59 patients (17.7%) were long-term survivors, including 43 FLT3-ITD positive patients. As of September 2012, approximately half of the 59 long-term survivors remained alive. Of the 59 long-term survivors, 22 patients (37.3%) were from Cohort 1 and 37 patients (62.7%) were from Cohort 2. Of Cohort 1's long-term survivors, one patient (4.5%) underwent an HSCT and 10 patients (45.5%) remained alive as of September 2012. Of Cohort 2's long-term survivors, 26 patients (70.3%) underwent an HSCT and 21 patients (56.8%) remained alive as of September 2012. The median duration of treatment for the long-term survivors was 46.5 weeks (with a range of 5.3-77.1 weeks) for Cohort 1 and 10.0 weeks (with a range of 3.3-108+ weeks) for Cohort 2.

The adverse events observed in quizartinib's phase 1 and phase 2 clinical trials in relapsed/refractory AML have been described as manageable. The most common all-grade treatment-emergent adverse events (reported in ≥ 20% of subjects) in the phase 2 trial included QT prolongation (changes in the patient's electrocardiogram pattern), gastrointestinal toxicities, febrile neutropenia (fever with reduction in white blood cell count), fatigue, pyrexia (fever),

anemia, edema peripheral (swelling of legs), and dysgeusia (distortion of the sense of taste). Overall, there were no major differences between safety findings in FLT3-ITD positive and FLT3-ITD negative patients or between the patients in phase 1 and phase 2 clinical trials.

Exhibit 16: Treatment Emergent Adverse Events Occurring in ≥20% of Patients in Quizartinib's Phase 2 Clinical Trial (N = 333)

Adverse Event	Grade 1/2 n (% of N)	Grade3/4 n (% of N)	Total Patients (1) n (% of N)
Nausea	169 (51)	9 (3)	178 (53)
Febrile neutropenia (2)	NA	137 (41)	139 (42)
Diarrhea	122 (37)	14 (4)	136 (41)
Vomiting	120 (36)	11 (3)	131 (39)
Fatigue	95 (29)	18 (5)	113 (34)
Pyrexia (3)	89 (27)	12 (4)	103 (31)
Anemia	11 (3)	87 (26)	98 (29)
Electrocardiogram QT prolonged (4)	63 (19)	35 (11)	98 (29)
Edema peripheral	88 (26)	3 (1)	91 (27)
Decreased appetite	81 (24)	9 (3)	90 (27)
Dysgeusia	78 (23)	0	78 (23)
Constipation	68 (20)	2 (1)	71 (21)

Note: Patients are counted once only for each adverse event based on the maximum grade experienced for that event.

(1) Totals may exceed sums of columns due to reporting of adverse events without an associated grade.

(2) Febrile neutropenia cannot be reported as Grade 1 or 2.

(3) One case of Grade 5 pyrexia and pancytopenia (abnormally low reduction in all blood cells produced by bone marrow) was reported.

(4) All but one case of Grade 3/4 electrocardiogram QT prolongation was Grade 3.

Source: Ambit Biosciences.

The initial dose of quizartinib in the phase 2 clinical trial was 200 mg/day, which was the maximum tolerated dose determined in quizartinib's phase 1 clinical trial. The dose was reduced to 135 mg/day and 90 mg/day for males and females, respectively, for all subsequent patients after the observation of asymptomatic Grade 3 QT prolongation. Specifically, Grade 3 QT prolongation was observed in 35% of the first 17 patients who were dosed at 200 mg/day on a continuous basis, with a higher rate in females than in males. The incidence of asymptomatic Grade 3 QT prolongation in the subsequent patients was decreased to 16%, according to a result of an independent review of patient electrocardiograms. Preliminary data in quizartinib's phase 2b trial involving two new low doses of quizartinib (30 mg and 60 mg) further confirmed the dose-dependent nature of quizartinib's QT profile. (See Exhibit 17.) The higher rate of QT prolongation in females than in males is consistent with the literature suggesting that in general women have a higher prevalence of QT prolongation than men, for many hypothesized factors.

Exhibit 17: Dose-dependent QT Profile of Quizartinib

Comparing Grade 3 QT Prolongation in Phase 2b Versus Phase 2				
	Phase 2b*		Phase 2	
	30 mg N=20	60 mg N=19	90/135 mg N=316	200 mg N=17
Adverse Event	n (%)	n (%)	n (%)	n (%)
QT Prolongation	0 (0%)	1 (5%)	50 (16%)	6 (35%)

* includes 39 patients who had at least one post baseline QTc measurement.

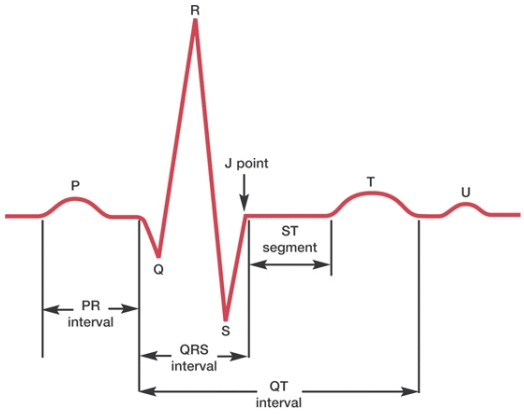
Source: Ambit Biosciences.

The majority of QT prolongation cases with quizartinib were asymptomatic and occurred within the first month of treatment. The majority of patients who experienced QT prolongation did not discontinue quizartinib. To date, there has been one case of Grade 4 QT interval prolongation with Torsade de pointes (an abnormal cardiac rhythm) in a patient taking quizartinib in the phase 2 trial. This patient had been receiving multiple concomitant medications and this event resolved after quizartinib discontinuation.

The QT interval refers to the time between the start of the Q wave and the end of the T wave in the heart's electrical cycle. (See Exhibit 18.) The QT interval represents electrical depolarization and repolarization of the left and right ventricles. A lengthened QT interval, referred to as QT prolongation, represents delayed ventricular repolarization and is a surrogate marker for the risk of developing Torsade de pointes (TdP), a potentially fatal condition. Because heart rate can also affect the actual measurement of QT interval, a heart-rate correction is often applied when evaluating QT interval, giving rise to the corrected QT interval, or QTc. There are different methods for heart-rate correction, including the Bazett's correction and the Fridericia correction.

QT prolongation is a common adverse finding associated with several other kinase inhibitors and could represent a class effect. The QT profiles and relevant prescribing information for six approved kinase inhibitor drugs are as follows.

Exhibit 18: A Typical One-Cycle Electrocardiogram Tracing



Source: NIH.gov.

TASIGNA (nilotinib), a Novartis drug for Philadelphia chromosome positive chronic myeloid leukemia (Ph+ CML), carries a black box warning on risks of QT prolongation and sudden death. TASIGNA's prescription label specifies that TASIGNA should not be used in patients with hypokalemia, hypomagnesemia, or long QT syndrome. In addition, TASIGNA should not be used with drugs known to prolong the QT interval or strong CYP3A4 inhibitors. The label also specifies that electrocardiograms (ECGs) should be obtained to monitor the QTc at baseline, seven days after initiation, and periodically thereafter, as well as following any dose adjustments.

In TASIGNA's clinical trial experience, the maximum mean QTcF (QT interval corrected for heart rate using Fridericia's method) change from baseline at steady state was 10 msec. Increase in QTcF >60 msec from baseline was observed in 2.1% of the patients and QTcF of >500 msec was observed in three patients (<1%). TASIGNA's label notes that sudden deaths have been reported in 0.6% of the patients with resistant or intolerant Ph+ CML receiving TASIGNA and that the relatively early occurrence of some of these deaths relative to the initiation of nilotinib suggests the possibility that ventricular repolarization abnormalities may have contributed to their occurrence.

The prescription label for SUTENT (sunitinib malate) includes a warning that QT prolongation and TdP (in <0.1% of patients) have been observed, and that SUTENT should be used with caution in patients at higher risk for developing QT prolongation. The label notes that ECG and electrolytes monitoring should be considered when using SUTENT.

The prescription label for SPRYCEL (dasatinib) notes that physicians should use SPRYCEL with caution in patients who have or may develop QT prolongation. These include patients with hypokalemia, hypomagnesemia, congenital long QT syndrome, and those taking anti-arrhythmic medicines or other medical products that lead to QT prolongation, and those taking cumulative high-dose anthracycline therapy. In SPRYCEL's clinical studies, 15 patients (out of 2440, <1%) had QTc prolongation reported as an adverse reaction and 22 patients (1%) experienced a QTcF >500 ms. In five phase 2 studies with a total of 865 leukemia patients, the maximum mean changes in QTcF (90% CI upper bound) from baseline ranged from 7.0 ms to 13.4 ms.

The label of TYKERB (lapatinib) has a warning that TYKERB may prolong the QT interval in some patients and that ECG and electrolyte monitoring should be considered.

The label of CAPRELSA (vandetanib) carries a black box warning on risks of QT prolongation, TdP, and sudden death. The label specifies that ECG should be obtained to monitor the QT at baseline, at 2-4 weeks and 8-12 weeks after starting CARELSA treatment, and every 3 months thereafter, as well as following any dose reduction or interruptions greater than 2 weeks. Because of the risk of TdP and sudden death, CAPRELSA is available only through a restricted program called Risk Evaluation and Mitigation Strategies (REMS). In CAPRELSA's clinical study experience, the mean QTcF change from baseline was 35 ms and remained above 30 ms for the duration of the trial (up to two years) for the 300 mg dose. In addition, 36% of patients experienced greater than 60 ms increase in the mean QTcF change.

The label of TRISENOX (arsenic trioxide) carries a black box warning on ECG abnormalities, including QT prolongation and complete atrioventricular block. The label recommends ECG and electrolyte monitoring prior to initiating therapy with TRISENOX. In over 460 ECG tracings from 40 patients with refractory or relapsed acute promyelocytic leukemia (APL) who were treated with TRISENOX, 16 of 40 patients (40%) had at least one ECG tracing with a QTc interval greater than 500 msec. Prolongation of the QTc was observed between one and five weeks after TRISENOX infusion, and then returned toward baseline by the end of eight weeks after TRISENOX infusion.

Update on Quizartinib's Ongoing Phase 2b Trial

In April 2012, Ambit Biosciences and former partner Astellas Pharma initiated a phase 2b clinical trial to study the efficacy and safety of two lower doses of quizartinib. In March 2013, the two companies announced they would end their collaboration for the joint development and commercialization of FLT3 inhibitors effective September 3, 2013. Ambit will assume all responsibility for the continuation and completion of the phase 2b clinical trial after September 3, 2013.

The ongoing phase 2b clinical trial (AC220-2004) is a randomized, open-label clinical trial of quizartinib as monotherapy in FLT3-ITD positive AML patients who are refractory or relapsed after two prior lines of therapy, with or without a prior HSCT. The quizartinib doses tested in this trial, 30 and 60 mg/day, are lower than those tested in the prior phase 2 trial and unlike the prior trial, there will be no dosing difference between male and female patients. Patients will be randomized equally between the two doses.

Ambit believes that reducing the dose may improve safety while maintaining efficacy. The proposed lower doses of quizartinib are based on evidence of efficacy and safety in doses studied in quizartinib's phase 1 trial in relapsed/refractory AML patients, as well as preclinical data demonstrating FLT3 target suppression at doses as low as 30 mg/day quizartinib.

The primary endpoints of the phase 2b trial are the rate of CRc and the rate of Grade 2, 3, or 4 QT prolongation at different doses of quizartinib. Secondary endpoints include bridge to an HSCT, CR rate, duration of remission, and overall survival. This clinical trial will enroll in the US and select European countries, including France, Germany, Italy, and the UK. As of April 2013, a total of 76 patients have been enrolled.

In a preliminary review of 34 patients in the phase 2b trial who had initiated dosing before January 1, 2013, Ambit observed a CRc rate of 37.5% (6/16) in the 30 mg cohort and 38.9% (7/18) in the 60 mg cohort. (See Exhibit 19.) Ambit believes that this represents similar response rates when compared to the results from the prior phase 2 clinical trial, with the caveat of a small patient number and limited follow-up experience. Additionally, 4 out of the 16 (25%) patients in the 30 mg cohort and 6 of the 18 (33.3%) patients in the 60 mg cohort were bridged to an HSTC, similar to the rate observed in the phase 2 trial.

Exhibit 19: Preliminary Review of Response Rates in 34 Evaluable Patients in Quizartinib's Phase 2b Clinical Trial

	30 mg Cohort		60 mg Cohort	
N=	16		18	
	n, % of N		n, % of N	
CRc	6	37.5%	7	38.9%
CR	0	0.0%	1	5.6%
CRp	0	0.0%	1	5.6%
CR(i)	6	37.5%	5	27.8%
PR	1	6.3%	7	38.9%

Source: Ambit Biosciences.

Compared to the phase 2 trial, a decreased rate of QT prolongation was observed in the phase 2b trial in 39 evaluable patients who had at least one post-baseline QTc measurement. The observed rate of Grade 3 QT prolongation was 0% (0/20) in patients dosed at 30 mg, and 5.3% (1/19) in patients dosed at 60 mg. Other treatment-emergent adverse events in the phase 2b trial appear to be similar to what was observed in phase 1 and phase 2 clinical trials based on an updated safety review as of March 26, 2013.

Exhibit 20: Treatment Emergent Adverse Events (All Grades) Occurring in ≥15% of Patients in Either Dose Group in Quizartinib's Phase 2b Trial

	30 mg Cohort N=21			60 mg Cohort N=20		
	Grade 1/2	Grade 3/4	Total	Grade 1/2	Grade 3/4	Total
Adverse Event	n (% of N)	n (% of N)	n (% of N)	n (% of N)	n (% of N)	n (% of N)
Nausea	2(10)	0	2(10)	6(30)	1(5)	7(35)
Diarrhea	1(5)	0	1(5)	6(30)	1(5)	7(35)
Febrile neutropenia (1)	NA	3(14)	3(14)	NA	6(30)	6(30)
Fatigue	2(10)	0	2(10)	4(20)	0	4(20)
Abdominal pain	1(5)	0	1(5)	4(20)	0	4(20)
Headache	1(5)	1(5)	2(10)	3(15)	0	3(15)
Vomiting	2(10)	0	2(10)	2(10)	1(5)	3(15)
Pneumonia	0	0	0	2(10)	1(5)	3(15)
Acute renal failure	0	0	0	1(5)	1(5)	3(15)*
Neutropenia	0	0	0	0	3(15)	3(15)
Anemia	1(5)	3(14)	4(19)	0	2(10)	2(10)

* Includes 1 case of Grade 5 acute renal failure that was assessed as not drug related.
(1) Febrile neutropenia cannot be reported as Grade 1 or 2.

Source: Ambit Biosciences.

Prior and Ongoing Phase I Trials

In May 2012, Ambit concluded an open-label phase 1 dose-escalation clinical trial that evaluated quizartinib as monotherapy in 76 relapsed/refractory AML patients irrespective of FLT3-ITD status. Patients in the trial had undergone a median of three prior treatment regimens. The primary objectives of this study were to determine the safety and tolerability of quizartinib, including dose-limiting toxicity. The study determined that the maximum tolerated dose with continuous dosing was 200 mg/day and the dose limiting toxicity was Grade 3 asymptomatic QT prolongation. Across all dose groups studied in this phase 1 clinical trial, the overall response rate

to quizartinib was 23/76 (30.3%) with 13 subjects (17.1%) achieving a PR and 10 subjects (13.2%) achieving a CRc, including 2 patients with a CR and 3 patients with a CRp.

In another completed phase 1 study, Ambit evaluated a recently developed solid dosage form (tablet) of quizartinib in healthy volunteers to confirm the equivalent bioavailability between the tablet form and the liquid form. Ambit expects to incorporate the tablet form in the planned phase 3 clinical trial, subject to guidance from the FDA.

In 2011 and 2012, Ambit and Astellas initiated two additional phase 1 quizartinib studies, both of which are currently ongoing. Ambit will assume all responsibility for the continuation and completion of these trials upon the termination of its collaboration with Astellas in September 2013. The first ongoing phase 1 study (initiated in November 2011) is a dose-escalating clinical trial evaluating quizartinib in combination with standard induction and consolidation chemotherapy in newly diagnosed AML patients. This phase 1 study also evaluates quizartinib as a maintenance therapy after consolidation chemotherapy for patients between the ages of 18 and 60 years of age with newly diagnosed AML. Ambit is confident that quizartinib's tolerability profile allows the possibility of dosing in combination with chemotherapy in the frontline setting and that the use of quizartinib in these patients will increase the overall CR rate and the durability of the response. The second ongoing phase 1 study (initiated in June 2012) is a dose-escalating clinical trial to evaluate quizartinib as a maintenance therapy for AML patients, irrespective of FLT3-ITD status, who have received an allogeneic HSCT and are currently in remission. This clinical trial will evaluate the safety and tolerability of quizartinib as maintenance therapy with a goal of increasing the duration of remission.

There is also an investigator-sponsored phase 1 trial of quizartinib in pediatric patients with either relapsed acute lymphoblastic leukemia (ALL), or relapsed AML. This clinical trial is ongoing and is being sponsored by the Therapeutic Advances in Childhood Leukemia & Lymphoma Cooperative Group. This trial is expected to enroll no more than 39 patients. Currently there are 14 patients enrolled. The maximum tolerated dose in this trial will help determine the dose for a planned follow-on phase 2 clinical trial in pediatric patients, which helps fulfill the pediatric investigational plan requirement by the European regulatory authorities for marketing approval in Europe.

Quizartinib in combination with standard chemotherapeutic agents such as cytarabine and azacitidine is also being evaluated in other investigator-sponsored studies for the treatment of high-risk myelodysplastic syndrome, or MDS. The FLT3-ITD mutations are found in approximately 3%-5% of MDS cases.

Future Development of Quizartinib in Relapsed/Refractory AML

Ambit plans to initially focus on FLT3-ITD positive patients with relapsed or refractory AML. Pending input from regulatory authorities, Ambit plans to initiate a randomized, comparative phase 3 trial in early 2014 to study quizartinib as a monotherapy versus physician's choice of standard chemotherapy in relapsed/refractory AML patients who are in first salvage therapy. Ambits plans to enroll approximately 350 patients over the age of 18 for this phase 3 trial. The primary endpoint of this study will be overall survival. Ambit is finalizing the phase 3 trial

design, which will be based on the full data from the phase 2 clinical trial, the ongoing phase 2b clinical trial, an ongoing drug-drug interaction study, and input from the FDA. Ambit expects that the top-line data for this phase 3 trial will be available in late 2015.

In addition, Ambit has initiated discussion with the FDA regarding acceptance of two novel surrogate endpoints, "CRc rate" and "bridge to an HSCT," which could support an accelerated approval based on the results of the phase 2 clinical trial. Ambit plans to continue these discussions with the FDA at an end-of-phase-2 meeting expected in September 2013.

In light of responses seen in FLT3-ITD negative patients in the phase 2 clinical trial, Ambit also plans to evaluate the potential use of quizartinib for FLT3-ITD negative patients as an opportunity for label expansion following potential approval of quizartinib for the treatment of FLT3-ITD positive patients.

Companion Diagnostic for Quizartinib

A PCR-based assay published by Murphy et al. in 2003 that determines the presence or absence of FLT3-ITD mutations in a patient's blood or bone marrow sample has been adopted as a routine component of AML genetic testing laboratories across the globe. In the US, this assay has been certified under the federal Clinical Laboratory Improvement Amendments of 1988, or CLIA. Ambit has included this assay as part of the screening criteria for its clinical trials and expects that regulatory approval of quizartinib will require approval of this FLT3-ITD assay in the form of a companion diagnostic test that has been validated for accuracy, precision and reproducibility.

Ambit has partnered with Genoptix Medical Laboratory, a Novartis company, to develop a validated companion diagnostic for use in quizartinib clinical trials and to prepare and submit a premarket approval application, or PMA, for this companion diagnostic to the FDA in connection with quizartinib's NDA submission. Ambit and Genoptix have had multiple discussions with the Center for Drug Evaluation and Research (CDER) and the Center for Devices and Radiological Health (CDRH) at the FDA regarding the companies' validation plan for the FLT3-ITD companion diagnostic for quizartinib.

Intellectual Property on Quizartinib

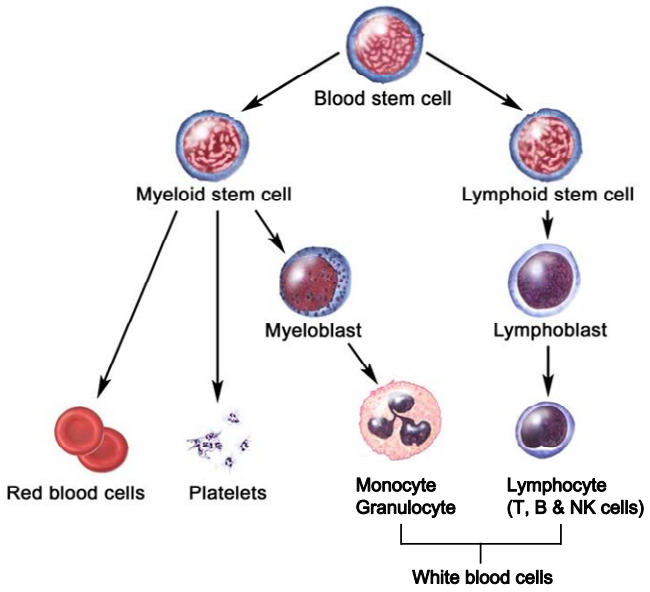
The composition of matter patent application covering quizartinib as well as a chemical genus to which quizartinib belongs will expire in 2028 (US Patent 7,820,657), with the possibility of additional term from patent term extension. Ambit has also obtained corresponding foreign composition of matter patents in China, Russia, Japan, Mexico, Malaysia, Singapore, Hong Kong, New Zealand, and South Africa, with pending patent applications in Argentina, Australia, Brazil, Canada, Europe, India, Israel, South Korea, Norway, the Philippines, and Taiwan.

Ambit also have pending applications that cover stable crystalline forms of quizartinib, metabolites of quizartinib, formulations of quizartinib, methods of manufacturing quizartinib, and various therapeutic uses of quizartinib. Collectively, these patents, if issued, would have patent expirations ranging from 2028 to 2030, not including any possible additional terms for patent term adjustments or patent term extensions.

Primer on AML

Acute myeloid leukemia is a clonal stem cell disease that derives from abnormal myeloid stem cells. The diagram in Exhibit 21 summarizes various lineages of blood cells. AML is characterized by uncontrolled proliferation of myeloid precursors with a reduced capacity to differentiate into more mature cell types. Accumulation of cells at various stages of maturation leads to a reduction in the production of healthy mature cells, resulting in the manifestation of typical AML symptoms. Reduction in red blood cells (anemia) leads to fatigue and dyspnea; reduction in platelets (thrombocytopenia) leads to increased bleeding risk; reduction in white blood cells (neutropenia) increases risk for infection.

Exhibit 21: Diagram Depicting Hematopoietic Lineages



Source: National Cancer Institute and BMO Capital Markets.

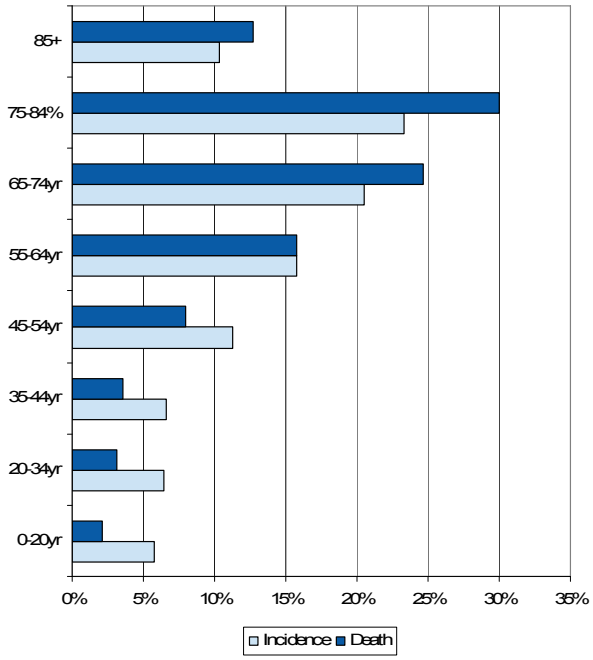
The left panel of Exhibit 22 summarizes the annual incidence and death of leukemia in the US. AML is the second most common form of leukemia and the most common type of acute leukemia, accounting for approximately 80% of all acute leukemia cases. AML is the most lethal leukemia, with an annual death rate of over 70% of incident cases. The National Cancer Institute estimates that close to 14,600 individuals will be diagnosed with AML in 2013 and close to 10,400 Americans will die of AML in 2013. AML occurs most commonly in individuals over the age of 65 years, as shown in the right-hand panel of Exhibit 22.

According the NCI, the median age of diagnosis of AML is 67 years of age and approximately 54% of diagnoses occur in individuals over the age of 65 years; however, 68% of deaths due to AML occur in individuals 65 years of age and older. The five-year survival rate for all AML patients is 23% and median survival is typically shorter for elderly patients, ranging from 3.9

months for patients 65 to 74 years of age to 1.4 months for patients 85 years of age or old. AML is slightly more common among men than women, with a male-to-female ratio of 5:3.

Exhibit 22: Incidence of AML by Age

Leukemia	Incidence	Deaths	Lethality
Acute lymphoblastic	6,070	1,430	24%
Acute myeloid	14,590	10,370	71%
Chronic lymphocytic	15,680	4,580	29%
Chronic Myelogenous	5,920	610	10%



Sources: NCI and BMO Capital Markets.

Development of AML can occur de-novo or secondary to chemotherapy in which case AML is often preceded by myelodysplasia (MDS), a pre-leukemic myeloid stem cell disorder. Toposiomerase II inhibitors such as anthracyclines (e.g., doxorubicin) and alkylating agents (e.g., cyclophosphamide) are most recognized as pre-disposing subjects to a risk of AML. The development of AML is poorly understood, but in animals the development of leukemia requires two steps. The first step involves a mutation in what has been classified as a class I gene such as FLT3, which stimulates signal transduction, while the second abnormality occurs in a class II gene such as RUNX, which is a transcription factor. On top of these inducing events are other mutations that contribute to the pathogenesis of AML, and these are drawn from a list of so-called class III genes and include genes associated with epigenetic changes such as DNMT3A or EZH2. As noted, this model of AML has been formulated from animal models and the most recent and detailed analysis of AML in humans from the Cancer Genome Atlas suggests that just over half the 200 cases studied had a class I mutation.

AML is a heterogeneous disease and in the 1970s, French, American, and British scientists set out to classify AML based on the cell of origin in what has become known as the FAB classification system, which is summarized in Exhibit 23. In the FAB system, close to 40% of AML is derived from the myeloblastic cell, with less differentiated cells having an average prognosis and more differentiated cells a better prognosis. Abnormal precursors of white blood

cells also lead to acute promyelocytic leukemia (APL) and acute myelomonocytic leukemia (AMML), with APL having the distinction of being the only subset of AML that can be treated with highly effective therapy. The rare M6 and M7 subtypes of AML derive from red blood cell and platelet precursors, respectively, and carry a poor prognosis.

Exhibit 23: FAB Classification of AML

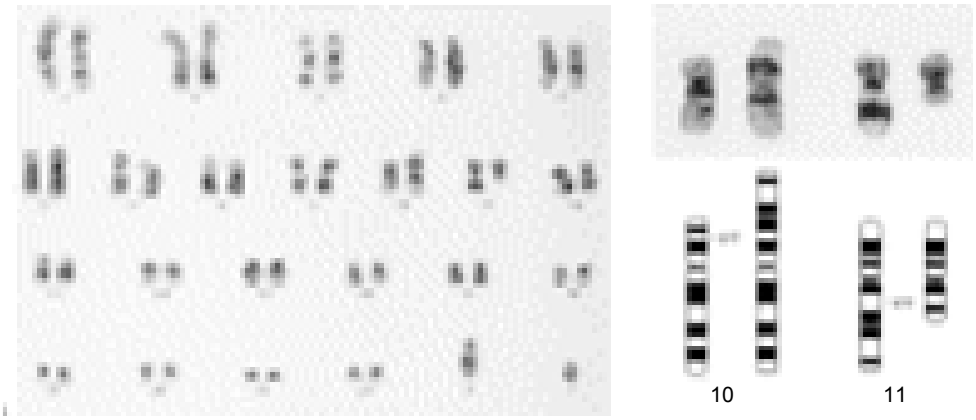
FAB Subtype	Name	% of adult AML Patients	Relative prognosis
M0	Undifferentiated acute myeloblastic leukemia	5%	Worse
M1	Acute myeloblatic leukemia with minimal maturation	15%	Average
M2	Acute myeloblastic leukemia with maturation	25%	Better
M3	Acute promyelocytic leukemia	10%	Best
M4	Acute myelomonocytic leukemia	20%	Average
M4 eos	Acute myelomonocytic leukemia with eosinophilia	5%	Better
M5	Acute monoblastic or monocytic leukemia	10%	Average
M6	Acute erythroid leukemia	5%	Worse
M7	Acute megakaryoblastic leukemia	5%	Worse

Risk Status	Cytogenetics	Molecular Abnormalities	Estimated 5-year Survival
Good	inv(16) or t(16;16) t(8;21) t(15;17)	Normal cytogenetics: NPM1 mutation in the absence of FLT-ITD or isolated biallelic CEBPA mutation	55% - 65%
Intermediate	Normal cytogenetics +8 alone t(9;11) Other non-defined	t(8;21(, inv(16), t(16;16) with c-KIT mutations	25-41%
Poor	Complex (<3 or more chromosomal abnormalities) Monosomal karyotpye -5. 5q-, -7, 7q- inv(3), non-t(9;11) t(6;9) t(9;22)	Normal cytogenetics: with FLT3-ITD mutation	5%-14%

Sources: Cancer.org, NCCN and BMO Capital Markets.

The bottom half of Exhibit 23 shows a more modern classification schema that moves away from reliance on the light microscope to describe molecular abnormalities. Since the same molecular abnormality can occur across multiple FAB subtypes, prognosis is dictated less by the FAB subtype and more by the sum of underlying genetic abnormalities. Chromosomal abnormalities are determined by an examination of a metaphase spread to look at the structure of all chromosomes. Exhibit 24 illustrates an example of a chromosomal alteration found in AML, in this case a translocation of a piece of chromosome 11 to chromosome 10.

Exhibit 24: Example of an Abnormal Karyotype Associated with AML



Sources: NIN.gov.

Of relevance to Ambit, good prognosis patients do not harbor the FLT-ITD abnormality while poor prognosis patients do. In the WHO schema not all AML has been defined by molecular abnormalities and the AML "not otherwise specified" category largely follows the FAB format. Even within the poor risk category, certain abnormalities carry an especially poor risk, for example the HOVON/SAKK clinical trial group experience suggests a four-year survival rate of 4% in subjects with a monosomal karyotype, indicating loss of all or part of one of the pair of chromosomes, versus 26% for those with complex karyotype including at least three or more chromosomal abnormalities.

In the post human genome sequencing era, the first cancer patient to undergo whole genome analysis at Washington University had a diagnosis of AML and since then AML has been at the forefront of genetic and epigenetic search. In late May the results of the Cancer Genome Atlas Research Network were published in the *New England Journal of Medicine* (Ley at al., V68;22 p2059-74), representing the most comprehensive genomic and epigenetic analysis of de novo AML published to date. The CGA analyzed 200 clinically annotated cases of de novo AML for DNA sequences, RNA and miRNA, and DNA-methylation status. The authors concluded that genetic driver mutations could be identified in nearly 200 cases. Given that conventional cytogenetic analysis, which as been the mainstay of risk assessment for the past three decades, can only identify an abnormality in 50% of subjects, the CGA data represent a significant step forward, especially for patients with an intermediate risk profile where an absence of prognostic markers impairs rational treatment decision making. The characteristics of the 200 subjects involved in the CGA study are summarized in Exhibit 25.

Exhibit 25: Baseline Characteristics of the Cancer Genome Atlas AML Study

Characteristic	Percentage
Cytogenetic Risk	
Favorable	18%
Intermediate	58%
Unfavorable	22%
AML FAB Subtype	
AML with minimal maturation	10%
AML without maturation	23%
AML with maturation	22%
Acute promyelocytic leukemia	10%
Acute myelomonocytic leukemia	20%
Acute monoblastic or monocytic leukemia	11%
Acute erythroid leukemia	2%
Acute megakaryoblastic leukemia	2%
Immunophenotype	
CD13+	76%
CD33+	81%
CD34+	62%
CD117+	94%

Sources: Ley *et al.,* NEJM and BMO Capital Markets.

The average number of genes mutations across the 200 specimens was 13 (0-51), although the range was affected by three outlier patients with 35, 36, and 51 mutations. In three subjects, no mutations were observed but in these individuals well-recognized gene fusions were observed. The lowest number of mutations, 2.09, was associated with subjects harboring the MLL fusion, suggesting that these tumors require fewer cooperating mutations than other AML-initiating events. Mutations in AML occur early during hematopoiesis and as a consequence nearly all cells from an individual tumor contain the same mutation. Over half the tumors contained both a founding clone and at least 1 sub-clone. The authors clustered the fusions and mutations into nine distinct biological classes, as shown in Exhibit 26.

Exhibit 26: Biological Classes of AML Fusions and Gene Mutations

Class	Example	Frequency
Activated Signaling Genes	FLT3	59%
DNA-Methylation Genes	DNMT3A	44%
Chromatin Modifying Genes	EZH2	30%
Nucleophosmin (NPM)	NPM1	27%
Myeloid Transcription Factor Genes	RUNX1	22%
Transcriton Factor Fusions	PML-PARA	18%
Tumor Suppressor Genes	TP53	16%
Spliceasome Genes		14%
Cohesin-Complex Genes		13%

Sources: Ley *et al.,* NEJM and BMO Capital Markets.

While a considerable degree of mutual exclusivity for individual fusions or mutations occurred within each biological class, FLT3 and K/NRAS mutations for example, co-mutation across certain classes was common with FLT3, DNMT3A and NPM1. Unsupervised clustering of RNA and miRNA with FAB AML subtypes suggested that FLT3 strongly correlated with AML without maturation along with NPM1, DNMT3A, cohesion complex genes and miR10a. Methylation analysis suggested that, with respect to FLT3, co-occurrence of NPM1, DNMT3A and FLT3 mutations was associated with extensive loss of methylation. The authors conclude that the occurrence of NPM1, DNMT3A and FLT3 with specific RNA/miRNA signatures may describe a specific subset of AML with unique epigenetic features.

AML Treatment Options

Treatment of AML is divided crudely into induction therapy to produce a major response and restore normal hematopoiesis followed by consolidation therapy to increase the duration of response by further reducing the level of leukemic cells to a level that can be contained by immune surveillance. Because AML is a disease of the elderly, guidelines such as those from the National Comprehensive Cancer Network (NCCN) have suggested that patients under the age of 60 years receive more aggressive therapy than those aged over 60 years. The recommended regimens for AML have changed little in the last decades, and increases in OS have come largely from improvements in supportive care. Supportive care measures for AML include red blood cell and platelet transfusions to alleviate symptoms of anemia and thrombocytopenia, prophylactic antibiotic and antifungal use to reduce infection risk and hydroxyurea to manage excess cancer cell number (leukocytosis).

The NCCN AML panel consists of 22 physicians who meet at least annually to consider whether the guidelines need to be updated based on newly published or presented data and FDA recommendations. The panel's recommendations follow the level of consensus for the evidence, resulting in one of four recommendations, which are summarized in Exhibit 27. Unless noted, all recommendations are a category 2A.

Exhibit 27: NCCN Recommendation Grid

NCCN Category	Recommendation
1	Based upon high-level evidence there is uniform NCCN consensus that the intervention is appropriate
2A	Based upon lower-level evidence there is uniform NCCN consensus that the intervention is appropriate
2B	Based upon lower-level evidence there is major NCCN disagreement that the intervention is appropriate
3	Based on any level evidence there is NCCN consensus that the intervention is appropriate

Sources: NCCN.

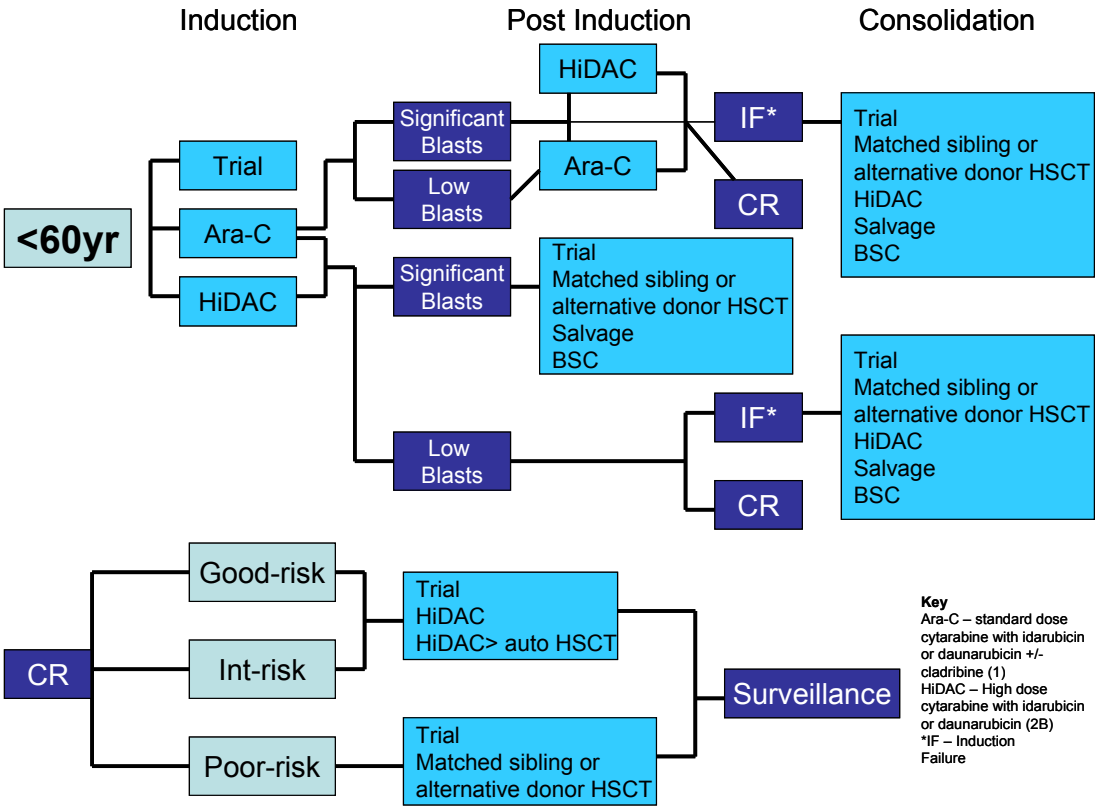
Induction <60 Years of Age

The standard induction regimen for AML is a 7+3 regimen of a seven-day continuous infusion of cytarabine (Ara-C) with three days of idarubicin producing a CR rate of 60-80%. The addition of cladribine as a third drug is listed as a category 1 option by NCCN following data from a Polish trial indicating improved outcomes compared to the two-drug regimen in subjects with high risk cytogenetics. High dose cytarabine has been evaluated as part of the induction and/or consolidation regimen in many trials, however higher levels of treatment-related death and grade 3 or higher neurological toxicity have been observed. Because of this, high-dose Ara-

C is considered experimental and as such carries a 2B recommendation. Initial treatment of AML in patients under the age of 60 years is summarized in Exhibit 28.

Achievement of a CR following induction therapy is influenced by cytogenetics, with 87%, 79% and 62% of subjects with high, intermediate or poor-risk cytogenetics achieving a CR in a report by Weick in the NEJM published in 1996. Because only 50% of patients with poor risk cytogenetics are likely to achieve a CR, NCCN recommends participation in a clinical trial.

Exhibit 28: Initial Treatment Options for AML Patients Aged Under 60 Years



Sources: NCCN and BMO Capital Markets.

Seven to 10 days following a seven-day course of induction therapy, a bone marrow biopsy is used to determine the depth of response. Subjects with low blasts can receive a second course of induction therapy or high dose Ara-C unless hypoplasia (low blood cell count) is present. For subjects with high levels of blasts, escalation to high dose Ara-C can be considered alongside a course of re-induction therapy. Subjects with significant blasts following high-dose induction, however, are considered induction failures and NCCN recommends a clinical trial. Alternatively if a bone marrow donor is available, the patient may be eligible to proceed to an allogeneic transplant as up to 25-30% of patients can be salvaged. NCCN also notes that absent the use of a cytarabine regimen or transplant, data have been published for salvage chemotherapy regimens (see Exhibit 30), and best supportive care is always an option for patients not able to or electing to continue cytotoxic therapy.

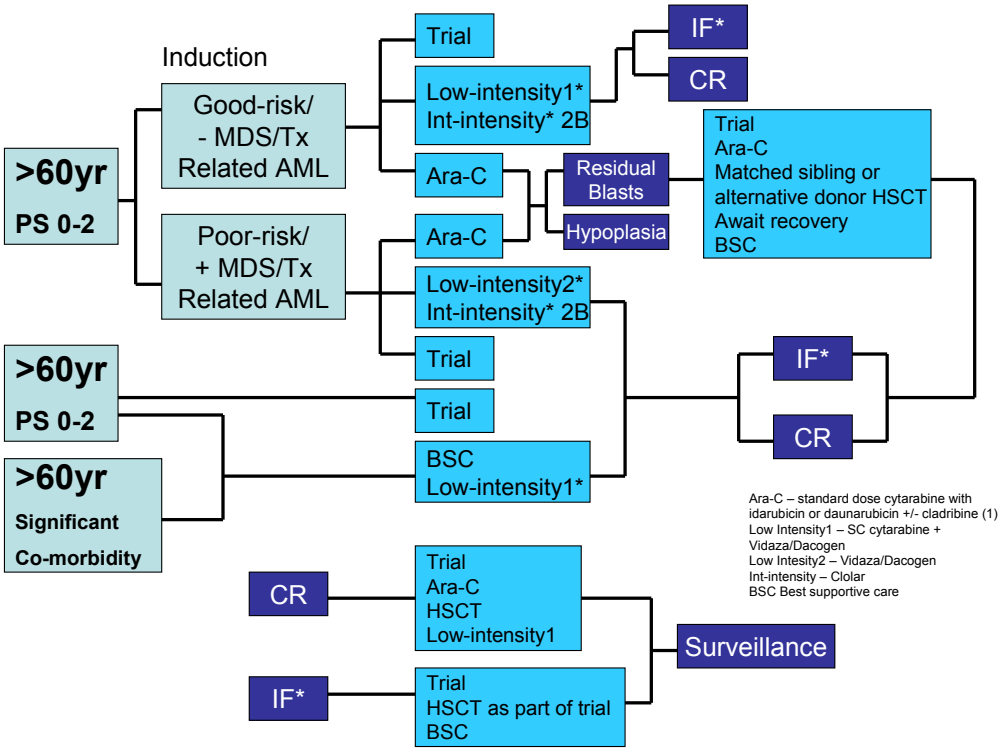
Post Remission and Consolidation Therapy <60 Years of Age

The traditional approach to post induction/consolidation therapy for subjects with good or intermediate risk cytogenetics has been 3-4 cycles of high dose Ara-C. Alternative strategies include 1-2 cycles of high dose Ara-C followed by stem cell transplant. Choice of consolidation therapy requires an analysis for genetic risk factors and patient co-morbidity. With respect to the presence of a FLT3 abnormality and normal karyotype, NCCN recommends clinical trial or early allogeneic transplant.

Induction Therapy > 60 Years of Age

Elderly patients have worse outcomes with a standard 7+3 regimen in part owing to a decrease in the frequency of favorable genetic abnormalities and an increase in the frequency of poor risk genetic abnormalities. In addition, the development of AML secondary to prior myelodysplasia or chemotherapy becomes more common in the elderly AML patient as does a higher rate of multidrug resistance protein expression. Finally an increase in the frequency of co-morbidities and increase in treatment related mortality all conspire to diminish outcomes for elderly AML patients.

Exhibit 29: Initial Treatment Options for AML Patients Aged Over 60 Years



Sources: NCCN and BMO Capital Markets.

As shown in Exhibit 29, subjects with a good performance status, good risk cytogenetics, and a disease that is not secondary to prior therapy or antecedent myelodysplasia can be treated with the 7+3 regimen of seven days continuous cytarabine (Ara-C) with three days of idarubicin. NCCN AML guidelines also provide for idarubicin dose escalation. Across all trials described by NCCN for elderly subjects, the expected range of complete response is 40%-60%. NCCN recognizes CLOLAR as an alternative intermediate intensity treatment option for the medically fit good risk elderly patient; however, absent phase 3 data for which a trial is ongoing, the current NCCN recommendation for CLOLAR in the induction setting is a 2B. For patients deemed unfit for standard or intermediate intensity therapy, treatment with a hypomethylating agent such as VIDAZA with or without a histone deacetylase inhibitor is an option to chemotherapy. In a phase 3 registration enabling trial, VIDAZA improved overall survival compared to physician's choice of best supportive care, low dose cytarabine, or intensive chemotherapy, from 16 to 24.5 months.

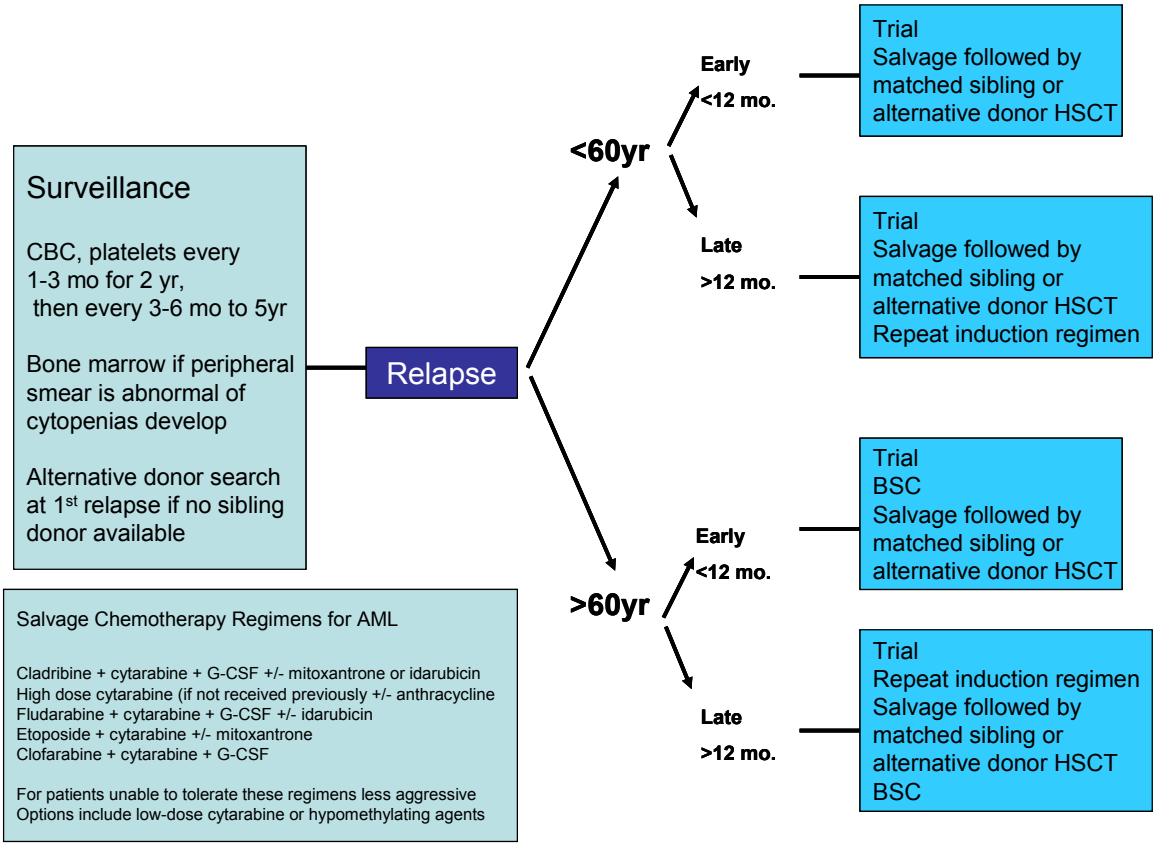
Subjects who have an ECOG performance status of more than two, or present with significant co-morbidities are less likely to benefit from the standard 7+3 regimen and NCCN recognizes that low intensity therapy remains an option. Clinical trials are a highly recommended option as induction therapy for all AML patients aged over 60 years.

As with younger patients, bone marrow assessment following induction therapy is required to assess the patients' ability to receive consolidation therapy. Patients with residual blasts and an absence of hypoplasia are candidates for addition cytarabine with an anthracycline or mitoxantrone. Another option for elderly AML patients is a reduced intensity allogeneic transplant, which has been shown to be effective during a first CR.

Surveillance and Salvage Therapy for AML

For patients achieving a CR and completing therapy, the current recommendation from NCCN is surveillance, as no maintenance therapy has yet proven to be beneficial. NCCN's recommendation for surveillance in AML is detailed in Exhibit 30 and involves regular blood count assessment with follow-up bone marrow for suspicion of relapse. Stem cell transplant is an option for subjects in a first CR or first relapse and identification of an appropriate donor should be considered during surveillance. Treatment options for relapsed disease take into account age and duration of remission. Options for treatment include a transplant if disease burden is low at relapse or, if the length or relapse has been over 12 months, re-induction and consolidation can be considered. For patients not eligible or willing to receive additional cytotoxic chemotherapy, best supportive care remains an option; however, clinical trials are strongly recommended by NCCN for patients with relapsed disease.

Exhibit 30: Surveillance and Salvage Treatment AML



Sources: NCCN and BMO Capital Markets.

NCCN lists salvage chemotherapy regimens that have been shown to have a benefit in relapsed/refractory disease including CLOLAR, which in the CLASSIC I trial led to an ORR of 47% (35% CR) and an OS of 6.6 months. As noted in Exhibit 30, salvage regimens are considered aggressive and may be suitable only for the fittest of subjects.

Historical New Drug Applications in AML

From 2005 to 2012, a total of four drugs sought FDA approval for use in elderly and poor-risk patients with AML: Johnson & Johnson's ZARNESTRA (tipifarnib) in 2005, Genzyme's CLOLAR (colofarabine) in 2009, Vion Pharmaceuticals' ONRIGIN (laromustine) in 2009, and Eisai's DACOGEN (decitabine) in 2012. All four drugs went before the Oncologic Drugs Advisory Committee (ODAC) of the FDA, and none received favorable votes from the committee or approval from the FDA. Exhibit 31 summarizes the supporting clinical studies for these drugs and compares them to quizartinib's phase 2 study.

ZARNESTRA

The NDA application for ZARNESTRA was supported by a single-arm, open-label study, CTEP-20. The target population in this study were patients 75 years of age or older with newly diagnosed AML or patients 65-74 years of age with secondary AML arising from prior myelodysplastic syndrome (MDS). Eligible patients had a performance status of 0 or 1 and acceptable hepatic and renal function. Patients received orally administered ZARNESTRA 600 mg twice daily for 21 days in 28 cycles. Subsequent cycles started 7 to 42 days following completion of the previous cycle. The primary endpoint was CR rate, and the FDA determined that the confirmed CR rate was 11% (95% CI: 6.6%-18%) in elderly patients with untreated poor-risk AML. The secondary endpoint, duration of CR, was 275 days (95% CI: 127-376 days).

The main issues raised by the ODAC at the FDA advisory meeting for ZARNESTRA were that the study was not a randomized study and that many patients who were enrolled in the trial could have undergone conventional therapy. A later randomized trial comparing ZARNESTRA to best supportive car plus hydroxyurea in AML patients age 70 years or older found no survival advantage to ZARNESTRA treatment.

Exhibit 31: Summary of AML Drug Candidates That Sought FDA Approval in 2005–2012 and Comparison With Quizartinib

Drug name	Quzartinib	Decitabine	Clofarabine	Laromustine		Tipifarnib
Brand name		DACOGEN	CLOLAR	ONRIGIN		ZARNESTRA
NDA sponsor	Ambit Biosciences	Eisai	Genzyme	Vion Pharmaceuticals		Johnson & Johnson
Year of ODAC meeting	N.A.	2012	2009	2009		2005
Trial name	AC220-002	DACO-016	CLO024300606	CLI-043	CLI-033	CTEP-20
Phase of trial	Phase 2	Phase 3	Phase 2	Phase 2	Phase 3	Phase 2
Trial design	Single arm	Randomized	Single arm	Single arm	Single arm	Single arm
Target patients	Relapsed/Refractory AML	Older patients with newly diagnosed de novo or secondary AML	Untreated elderly poor-risk AML	Poor risk elderly patients with de novo AML		Untreated elderly poor-risk AML
N= (elderly patients)	333	485	112	85	55	136
Primary Endpoint	CR + CRp + CR(i)	OS	CR + CRp	CR + CRp	CR + CRp	CR
% over 70 yrs old	N.A.	71%	62%	78%	71%	55% ≥75 yrs, all ≥65 yrs
Median age	69 for Cohort 1 51 for Cohort 2	73	71	N.A.	N.A.	N.A.
CR	3.2% for ITD+ve 3.6% for ITD-ve	16%	37.5%	28% for CR+CRp	29% for CR+CRp	11%
CRp	2.4% for ITD+ve 2.4% for ITD-ve	2%	8%			N.A.
CR(i)	44.8% for ITD+ve 27.4% for ITD-ve	N.A.	N.A.	N.A.	N.A.	N.A.
PR	24.6% for ITD+ve 11.9% for ITD-ve	N.A.	3.6%	N.A.	N.A.	N.A.
Median duration of response	12.1 weeks for ITD+ve Cohort 1 10.6 weeks for ITD+ve Cohort 2	N.A.	51.6 weeks	N.A.	N.A.	39.3 weeks
Median OS	25.4 weeks for ITD+ve Cohort 1 24 weeks for ITD+ve Cohort 2	30.8 weeks (95% CI: 24.8, 36.8) for DACOGEN arm, 20 weeks (95% CI: 16.8, 25.2) for control arm	40.7 weeks	14 weeks	14.7 weeks	N.A.

Source: FDA and BMO Capital Markets.

CLOLAR

The NDA application for CLOLAR was based on a primary phase 2 study (CLO24300606) and one supportive phase 2 study. The primary study was a single-arm, 116-patient study that enrolled patients that had at least one of the following adverse AML prognostic factors: (1) age ≥70; (2) antecedent hematologic disease (AHD); (3) ECOG performance status of 2; (4) intermediate or unfavorable karyotype. Patients received an induction cycle of CLOLAR 30 mg/m2/day infusion for five consecutive days followed by up to five additional cycles of

CLOLAR 20 mg/m2/day for five consecutive days, repeated minimally every 28 days. The primary endpoint is overall response rate (ORR), which was defined as a patient achieving either CR or CRp.

In the main study, the CR plus CRp rate was 45.5% (95% CI 36.1-55.2), with a median duration of response of 51.6 weeks (95% CI 33.1-68.7). The median overall survival for all patients was 40.7 weeks (95% CI 28.3-52.0) and the median overall survival for patients with CR plus CRp was 60.8 weeks (95% CI 49.9-76.6).

The FDA cited two major problems with CLOLAR's application, similar to its opinions for ZARNESTRA's application. The agency was concerned that the main study supporting CLOLAR's application was a single-arm study, and that many of the patients were suitable candidates for conventional therapy. The agency noted that although the main study intended to evaluate CLOLAR in older adult AML patients who were less likely to benefit from standard induction chemotherapy, its eligibility criteria were established in such a way that patients with relatively good prognosis could be enrolled into the study. For example, a patient who was over 70 years old but otherwise healthy might be able to tolerate standard induction chemotherapy well.

The FDA cited data on post-CLOLAR therapy experience to support the above view. Of 112 patients in the main study, 12 patients were subsequently transplanted after CLOLAR, and another 23 patients received intensive chemotherapy after CLOLAR with a CR+CRi/CRp rate of 48%. These data seemed to support the FDA's position that a substantial number of elderly AML patients in this study were suitable for standard induction chemotherapy or other intensive chemotherapy.

The FDA reasoned that because the study recruited a heterogeneous population of patients, there was a possibility that the observed response rate and duration were a result, at least in part, of recruitment of patients with relatively good prognosis. The FDA noted that this concern could have been addressed if the study had been designed as a comparative trial rather than a single-arm trial.

ONRIGIN

The NDA application for ONRIGIN was based on a single-arm phase 2 study in 85 patients (CLI-043) and a study comprising 55 patients selected post-hoc from a larger phase 2 single-arm study (CLI-033). The application also included data from a randomized, controlled, phase 3 trial, which had been placed on hold owing to excess mortality in the ONRIGIN containing arm (CLI-037).

CLI-043 was a prospective, single-arm, phase 2 study in 85 patients aged 60 years or older who had previously untreated, de novo AML and had at least one of four baseline "poor risk" characteristics: (1) age ≥70; (2) ECOG performance status of 2; (3) unfavorable cytogentics; (4) cardiac, lung, or liver co-morbidity. The primary endpoint for the trial was the response rate of CR plus CRp. Secondary endpoints included overall survival (OS), leukemia-free survival, toxicities, and other exploratory analyses. Patients were treated with an induction therapy of at least one treatment of 600 mg/m2 ONRIGIN and a consolidation therapy of cytarabine.

The complete remission rate, defined as CR plus CRp, for the CLI-043 trial was 28% (95% CI: 19%, 39%) based on an independent review of post-induction marrows. Median overall survival was 98 days, or 3.2 months (95% CI: 42, 497 days).

CLI-033 was a single-arm phase 2 trial of ONRIGIN in combination with oral hydroxyurea. The trial enrolled 184 patients aged 60 years or older who had AML or MDS, or relapsed AML/MDS. Unlike in CLI-043, there was no attempt to select for patients who were judged as ineligible for standard induction therapy in CLI-033. Retrospectively, a subgroup of 55 patients judged to be similar to CLI-043's enrolled patients were selected to combine with CLI-043's patients for efficacy analysis. Patients were treated with ONRIGIN + hydroxyurea for induction followed by ONRIGIN for consolidation.

The complete remission rate, again defined as CR plus CRp, for the CLI-033 trial was 29% based on an independent review of post induction marrows, and the median overall survival was 103 days.

CLI-037 was a randomized, placebo-controlled trial that enrolled patients with relapsed AML, age 18 and older, and compared cytarabine given over three days as a single agent, or cytarabine given over three days in combination with ONRIGIN 600 mg/m2 given on day two. The primary endpoint was response rate and the secondary endpoint was overall survival. According to the clinical study report, the response rates for CLI-037 were 18% for the cytarabine arm and 35% for the ONRIGIN plus cytarabine arm, and the overall survival were 176 days for the cytarabine arm and 128 days for the ONRIGIN plus cytarabine arm. CLI-037 was placed on hold for excess pulmonary toxicity that was judged as unacceptable by the Data Safety Monitoring Board (DSMB).

The FDA noted that the CLI-043 and CLI-033 studies were confounded because the use of hydroxyurea or cytarabine in combination with ONRIGIN made it difficult to attribute the treatment effect to ONRIGIN alone. The FDA highlighted the fact that at an end-of-phase 2 meeting in 2006 the agency had strongly encouraged the company to conduct a randomized study, which could identify and isolate the safety and efficacy of ONRIGIN. Additional concerns raised by the FDA included a lower overall prognostic risk for the CLI-033 cohort compared to the CLI-043 cohort, and responses lasting less than 90 days.

DACOGEN

The NDA application for DACOGEN was based on a randomized study, DACO-016 and a single-arm study, DACO-017. DACO-016 was a randomized, controlled, open-label, multicenter phase 3 trial comparing DACOGEN (20 mg/m2/d administered for five consecutive days every four weeks) + control treatment as a first-line therapy for elderly patients (over 65 years of age) with de novo or secondary AML and intermediate- or poor-risk cytogenetics. The control treatment was either low-dose cytarabine (LDAC; 20 mg/m2/d once daily for 10 days every four weeks) plus supportive care or supportive care alone; 88% of the patients in the control arm received LDAC. The trial enrolled a total of 485 patients. The primary endpoint was overall survival, and the secondary endpoints were CR and CRp. At the protocol-defined clinical cutoff of 396 (81.6%) deaths, the hazard ratio for death in the DACOGEN arm

compared with that in the control arm was not significant (0.85; 95% CI, 0.69 to 1.04; p= 0.11), although the CR rate (16% vs. 7%) and the median overall survival time (7.7 vs. 5.0 months) in the DACOGEN arm was higher than those of the control arm.

The concerns that the ODAC members had over data from the DACO-016 trial were: (1) DACOGEN missed its primary endpoint of improving survival; (2) the response rate in the LDAC control arm was lower than had been observed in prior trials, for unknown reasons; (3) patient-reported outcomes were not improved with DACOGEN compared with LDAC; (4) efficacy results vary among different geographic regions, such that in Western Europe, where LDAC's usage in AML is more prevalent than in the US, the CR rate in the LDAC group was higher than that in the DACOGEN group.

Our View

Although there has been a series of four failed attempts at obtaining FDA approval for AML drugs in the past decade, a few key differences can be drawn between these drugs and quizartinib. The four drugs that went before quizartinib were targeted at newly diagnosed, elderly CML patients with certain adverse prognostic factors. Because these drugs aimed at being a first-line treatment for AML and because some patients in the targeted patient population might be healthy enough to undergo standard induction chemotherapy, the hurdle for efficacy benefit and risk tolerance for these drugs may be higher. In the case for CLOLAR, the FDA noted that some patients who progressed on CLOLAR got additional, alternative therapies, including transplantation, standard chemotherapy and intensive chemotherapy, and achieved good response. These concerns were less likely for quizartinib because it is targeted at AML patients who are relapsed or refractory to existing treatments.

The FDA was also highly concerned about the single-arm nature of the trials used in support of the regulatory approval of ZARNESTRA, CLOLAR, and ONRIGIN in newly diagnosed AML patients. However, as we noted from reviewing FDA briefing documents, the FDA may have different requirements for trial design for applications in first-line indications versus those in second-line/refractory indications. The following is an excerpt from ZARNESTRA's 2005 briefing document.

"For approval, a drug must demonstrate substantial evidence of effectiveness in a defined patient population. . . . In general, regular approvals for leukemia indications have been based on evaluation of complete remissions (CR) and remission duration. ***For second-line and refractory indications, these endpoints have been evaluated mainly in single arm trials. For first-line indications, evidence of benefit was derived from single arm and randomized trials.*** *Randomized trials were necessary in some settings given the context of evaluating multi-drug regimens in order to provide information regarding isolation of a drug's effect in the context of a combination regimen." – ODAC Briefing Document for ZARNESTRA NDA by DODP, CDER, and FDA.*

We note the position expressed by the FDA that single-arm trials may be acceptable as a basis for benefit evaluation in second-line or refractory leukemia indications. Therefore, although

Quizartinib's completed phase 2 trial and ongoing phase 2b trial are single-arm trials, they may not raise the same kind of concern from the FDA as the previous AML drug candidates.

Lastly, it is also worth noting that the approval environment and dynamics at the agency itself have changed significantly in recent years. For example, seven drugs have been approved on phase 2 data in the past two years, and there are signs that there will be more leeway for the use of surrogate endpoints with the new PDUFA V regulation.

Adequacy of Single-Arm Studies With Surrogate Endpoints for Regulatory Approval

In recent years FDA has approved a number of oncology drugs based on single-arm studies with a surrogate primary endpoint. In the past two years, FDA has approved ICLUSIG, BOSULIF, and SYNRIBO for treatment-resistant chronic myeloid leukemia, MARQIBO for treatment-resistant acute lymphoid leukemia and KYPROLIS multiple myeloma in the hematologic malignancies. For solid tumors, FDA approved XALKORI of ALK+ve NSCLC and ERIVEDGE for advanced basal cell carcinoma. ERIVEDGE, XALKORI, and ICLUSIG received priority review while the other drugs received standard review. Exhibit 32 summarizes key statistics for these seven drugs.

ICLUSIG

Ariad Pharmaceuticals' ICLUSIG (ponatinib) was approved in 2012 for subjects with CML or Philadelphia chromosome positive ALL, that is resistant or intolerant of prior tyrosine kinase inhibitor therapy. Approval was based on response rate, which for CML is either major cytogenetic response (MCyR) or major hematologic response, depending on the stage of disease. ICLUSIG approval was supported by the PACE trial, which enrolled 444 subjects into one of six cohorts:

- 267 with chronic phase CML including 64 with a T315I gatekeeper resistance mutation to currently approved TKI's; median duration of treatment (DOT) 281 days
- 83 with advanced phase CML (AP-CML); median DOT 286 days
- 62 with blast phase CML (BP-CML); median DOT 89 days
- 32 with Ph+ve ALL; median DOT 81 days

Subjects were enrolled a median of 6.1 years after diagnosis and 88% were resistant to prior TKI therapy (12% intolerant). Resistance associated with mutations in the BCR-ABL gene conferring resistance to exiting therapy was observed in 55% of subjects.

Exhibit 32: Recently Approved Oncology Drugs Using a Surrogate Endpoint

Drug	Sponsor	Disease	Indication	Primary Endpoint	Trial size	Outcome	Duration
Iclusig	Ariad Pharmaceuticals	Chronic Phase CML	Intolerant/resistant	MCyR	267	54%	>281 days
Iclusig	Ariad Pharmaceuticals	Blast or Accelerated Phase CML Ph+ve ALL	Intolerant/resistant	MaHR	AP- 83 BP - 62 ALL - 32	52% 31% 41%	9.5 mo. 4.7mo 3.2 mo
Bosulif	Pfizer	CP-CML	Intolerant/resistant	MCyR	1 prior TKI - 266 >1 prior TKI - 108	33.8% 26.9%	52.8% 18 mo. 51.4% 9mo.
Bosulif	Pfizer	AP/BP -CML	Intolerant/resistant	CHR/OHR	AP - 69 BP - 60	30.4%/55.1% 15%/28.3%	NR
Synribo	Teva	CP-CML	Intolerant/resistant to at least 2 TKIs	MCyR	76	18.4%	12.5mo.
Synribo	Teva	CP-CML	Intolerant/resistant to at least 2 TKIs	MaHR/CHR	35	14.3%/11.4%	NR
Marqibo	Talon Therapeutics	Ph-ve ALL	2nd line or greater	CR/Cri	65	15.4%	56 days
Kyprolis	Onyx Pharmaceuticals	Multiple Myeloma	3rd line or greater	ORR	262	22.9%	7.8 mo.
Xalkori	Pfizer	ALK+ve NSCLC	Locally advanced or metastatic	ORR	136/119	50%/61%	41.9/48.1 wk.
Erivedge	Curis	Basal cell carcinoma	Metastatic	ORR	33	30.3%	7.6mo.
Erivedge	Curis	Basal cell carcinoma	Locally advanced	ORR	63	42.8%	7.6mo.

Source: FDA and BMO Capital Markets.

The primary endpoint for the chronic phase (CP) population was MCyR, which was achieved in 54% of subjects (70% T315I cohort) and the median duration of response has yet to be reached. The primary endpoint for the other three cohorts was major hematologic response (MaHR) achieved in 52%, 31%, and 41% of AP-CML, BP-CML, and Ph+ve ALL, respectively, with median duration of responses 9.5, 4.7, and 3.2 months.

BOSULIF

BOSULIF (bosutinib) was approved in 2012 to treat adult patients with chronic, accelerated, or blast phase Ph+ CML with resistance or intolerance to prior therapy. Approval was based on a single-arm phase 1/2 study of BOSULIF in GLEEVEC-resistant or intolerant CML with separate cohorts for chronic, accelerated, and blast phase disease treated with one prior TKI (GLEEVEC) or more than one TKI (GLEEVEC followed by SPRYCEL and or TASIGNA). Definitions of GLEEVEC resistance included:

- Failure to achieve or maintain any hematologic improvement within four weeks;
- Failure to achieve a complete hematologic response (CHR) by 3 months, cytogenetic response by 6 months, or MCyR by 12 months;
- Progression of disease after a previous cytogenetic or hematologic response; or
- Presence of a genetic mutation in the BCR-ABL gene associated with GLEEVEC resistance.

GLEEVEC intolerance was defined as inability to tolerate GLEEVEC owing to toxicity, or progression on GLEEVEC with inability to receive a higher dose owing to toxicity; definitions of intolerance to SPRYCEL or TASIGNA were very similar.

The efficacy endpoints for patients with CP CML previously treated with GLEEVEC were the rate of MCyR at week 24 and duration of MCyR. The efficacy endpoints for patients with CP CML previously treated with both GLEEVEC and at least one additional TKI were the cumulative rate of attaining MCyR by week 24 and the duration of MCyR. The efficacy endpoints for blast phase (BP) and accelerated phase (AP) subjects were complete and overall hematologic response by week 48, CHR, and OHR.

The trial enrolled 546 subjects, 73% were GLEEVEC resistant and 27% GLEEVEC intolerant; 503 subjects were eligible for efficacy. Efficacy is described for:

- CP-CML previously treated with GLEEVEC – n=266, 33.8% MCyR lasting >18 months in 52.8%;
- CP-CML treated with GLEEVEC and at least 1 additional TKI – n=108, 26.9% MCyR lasting >9 months in 51.4%;
- AP-CML – n=69, CHR/OHR 30.4%/55.1% over 12 months or longer of follow-up; or
- BP-CML – n=60, CHR/OHR 15%/28.3% over 18 months or longer of follow-up.

SYNRIBO

Teva's SYNRIBO (omacetaxine mepesuccinate) was approved in 2012 to treat chronic or accelerated phase CML that is resistant to or intolerant of two TKI's. The approval is based on response rate from a combined cohort of patients from two trials. Subjects had received two or more approved TKIs with resistance or intolerance of SPRYCEL and or TASIGNA. The experience in chronic phase patients included 108 subjects exposed for a median of 7.4 months; in contrast, median exposure for the 55 accelerated phase patients was 1.9 months.

Seventy-six subjects with chronic phase disease were included in the efficacy analysis and included 36 (47%) failing all three approved TKI's (GLEEVEC, SPRYCEL, and TASIGNA). In addition, most subjects received non-TKI therapies including hydroxyurea (54%), interferon (30%), and/or cytarabine (29%). The primary endpoint was MCyR adjudicated by a DMC and was observed in 14 (18.4%) of subjects with a median duration of 12.5 months.

For the indication in accelerated phase CML, 35 subjects were included in the efficacy analysis, 22 of whom (63%) had failed all three approved TKIs. As with the chronic phase patients, most had received non-TKI therapy including hydroxyurea (43%), interferon (31%), and/or cytarabine (29%). Efficacy was assessed as MCyR and MaHR (major hematologic response) or no evidence of leukemia (NEL). A MaHR was observed in 14.3% of subjects, a CHR in 11.4%, and NEL 2.9%.

MARQIBO

MARQIBO (liposomal vincristine) was approved in 2012 for the treatment of Ph-ve ALL in second or greater relapse, or whose disease has progressed following two or more anti-leukemic therapies. The approval is based on response rate defined as either a complete response, or complete response with incomplete hematologic recovery.

Sixty-five subjects were enrolled, characterized by:

- Achievement of a CR to at least one prior anti-leukemic therapy, defined as a leukemia-free interval of 90 days or more;
- In second or greater relapse; and
- Not eligible for immediate hematopoietic stem cell transplant at the time of screening and enrollment.

All treated patients had received prior vincristine sulfate and 80% had residual neuropathy at study baseline. Prior therapies included SCT in 48% and, in 51%, three or more prior therapies; 45% were refractory to their immediate prior therapy. Eighty-five percent had a diagnosis of B-cell ALL and 15% T-cell ALL.

Three subjects achieved a CR and seven a CR with incomplete blood count recovery for an ORR of 15.4 %. The median duration of CR/CRi was 28 days to the date of last available histologic assessment of the same response in eight subjects and 56 days based on date to first documented relapse, death, or subsequent chemotherapy including stem cell transplant.

KYPROLIS

KYPROLIS (carfilzomib) was approved in 2012 to treat subjects with MM that had received at least two prior therapies including VELCADE and an IMiD (REVLIMID or thalidomide) and had demonstrated disease progression on or within 60 days of completion of their last therapy. Approval was based on response rate in a trial of 262 subjects who had received two or more therapies including VELCADE, thalidomide and/or REVLIMID. Subjects enrolled were required to have demonstrated <25% response or progressed within 60 days of their most recent therapy. Approval was based on response rate as defined by the International Myeloma Working Group.

Patients enrolled were an average of 5.35 years from diagnosis and had received a median of five prior regimens including stem cell transplant in 74.4%. Refractory disease was defined as:

- Documented progression on last therapy - observed in 74.4% of subjects enrolled;
- Documented progression within 60 days of their last regimen - 14.3%; or
- A 25% or lower response rate to their last therapy - 6%.

Patients relapsing 60 days after their last therapy was noted in 5.3% of subjects enrolled. The primary endpoint was response rate determined by an independent review committee using the IMWG criteria with an ORR of 22.9% observed and a median duration of response of 7.8 months.

XALKORI

Pfizer's XALKORI (crizotinib) was approved in 2011 for the treatment of locally advanced or metastatic NSCLC that is ALK positive using the FDA-approved test. Approval was based on response rate using RECIST criteria. Approval was based on two single-arms studies both using RECIST defined response rate as the primary endpoint evaluated both by investigators and an independent radiology review panel. In the first 136-patient study, 0%, 10%, 27%, 27%, and 36% received no, one, two, three, or at least four prior systemic therapies for advanced disease, while in study two (n=119), 13%, 29%, 17%, 14 % 28% received no, one, two, three, or at least four prior systemic therapies. Overall response rates were 50% in study one and 61% in study two, with duration of response 41.9 and 48.1 weeks, respectively.

ERIVEDGE

Curis's ERIVEDGE (vismodegib) was approved in 2012 to treat metastatic basal cell carcinoma, or locally advanced disease recurring after surgery or disease that is not amenable to surgery or radiation therapy. ERIVEDGE approval was based on RECIST defined response in the metastatic cohort. For subjects with locally advanced disease, tumor response included measurement of externally assessable tumor including scar, and assessment for ulceration in photographs, radiographic assessment of target lesions if appropriate, and tumor biopsy. An objective response for locally advanced disease required at least one of the defined criteria to be met and absence of any criterion for disease progression.

Thirty-three patients were assessed for response in the metastatic cohort. Prior treatment for this cohort included surgery (97%), radiotherapy (58%), and systemic therapy (30%). For the locally advanced cohort (n=63) prior therapy included: surgery 89%, radiotherapy 27%, and systemic/topical therapy 11%. By independent review, objective responses were observed in 30.3% of subjects in the metastatic cohort and 42.8% in the locally advanced cohort and in both cohorts the duration of response was 7.6 months.

Development History of Cephalon's FLT3 Inhibitor, CEP-701, in Relapsed/Refractory AML

CEP-701 (lestaurtinib) is a derivative of the indolocarbazole K252, a microbial-derived compound. Originally developed as an inhibitor for the TRK family (high-affinity nerve growth factor receptors), CEP-701 was later discovered to be a highly potent inhibitor of FLT3 at nanomolar concentrations.

In an initial phase 1/2 trial and a subsequent phase 2 trial, CEP-701 demonstrated activity in reducing peripheral blood and marrow blasts in AML patients. The clinical activity in these trials was modest but reproducible, and correlated with *in vivo* FLT3 inhibition. CEP-701 was reported to be well tolerated in these clinical trials. In the phase 1/2 trial, 14 heavily pretreated, refractory and relapse AML patients with FLT3 mutations were treated at an initial dose of 60 mg CEP-701 orally twice daily. Five patients had measurable clinical response, including significant reductions in bone marrow and peripheral blood blasts lasting between two weeks and three months.

The subsequent phase 2 study evaluated CEP-701 as a monotherapy in elderly and previously untreated AML patients who were considered unsuitable for intensive chemotherapy. This phase 2 trial enrolled 29 patients with a median age of 73 years, including 2 patients with FLT3-ITD mutations, 3 patients with FLT3-TKD mutations, and 24 patients with wild-type FLT3. Patients received CEP-701 for 56 days. The initial dose was 60 mg twice daily and the dose was escalated to 80 mg twice daily on day 29, absence of significant drug-related toxicity. The primary endpoint of the study was response rate. Clinical response was evaluable in 27 of 29 patients. Hematological improvements were observed in 3 out of 5 patients with FLT3 mutations and 5 out of 22 patients with wild-type FLT3. No patient achieved CR or PR by standard criteria and the majority of clinical responses were of short duration, with a median time to progression of 25 days. One patient achieved <5% marrow blast, but this was accompanied by persistent thrombocytopenia and bone marrow hypocellularity.

Studies *in vitro* demonstrated that chemotherapy and CEP-701 administered sequentially resulted in synergistic cytotoxicity. Based on this finding, Cephalon (later acquired by Teva Pharmaceuticals) conducted a phase 3 study. The randomized, multi-center Cephalon 204 trial enrolled 224 AML patients who had FLT3 mutations and were in their first relapse. Patients were randomized 1:1 to receive chemotherapy alone (either mitoxantrone, etoposide and AraC, or high dose AraC, depending on the first remission's duration) or chemotherapy followed by 80 mg CEP-701 twice daily. The primary endpoint of the phase 3 trial was CR or CRp and the key secondary endpoint was overall survival. The median age of patients was 59 years (range 20-81 years) for the chemotherapy + CEP-701 arm and 54 years (range 21-79 years) for the chemotherapy-only arm. The FLT3 mutations harbored by the large majority of patients were ITD mutations. Of the 112 patients in the CEP-701 arm, 97 patients had ITD mutations, 8 patients had D835 mutation, and 6 patients had both mutations. Of the 112 patients in the control arm, 101 patients had ITD mutations, 9 patients had D835 mutation, and 2 patients had both mutations.

Exhibit 33 summarizes the primary outcome of remission for the two arms. There was no statistically significant improvement in the primary endpoint of CR plus CRp rate in the CEP-701 arm (26%) versus the control arm (21%). Stratifying the patients according to duration of patients' first remission or according to patients' age also failed to produce significant difference between the two arms. There was also no difference in overall survival between the two arms.

Exhibit 33: Primary Outcome of the CEP-701 Phase 3 Cephalon 204 Trial

	Chemotherapy only, n (%)	Chemotherapy + CEP-701, n (%)	
N=	112	112	*p-value*
CR	13 (12%)	19 (17%)	0.25
CRp	10 (9%)	10 (9%)	> .99
CR plus CRp	23 (21%)	29 (26%)	0.35
CR plus CRp, patients whose first remission lasted 1-6 mo	6 (11%)	10 (19%)	0.42
CR plus CRp, patients whose first remission lasted ≥ 6 mo	17 (29%)	19 (32%)	0.84
CR plus CRp, < 50 y of age	4 (12%)	9 (27%)	0.21
CR plus CRp, ≥ 50 y of age	19 (24%)	20 (25%)	> .99

Source: Levis M. *et al. Blood*, 2011 117:3294-301.

Twenty-four percent of patients in the CEP-701 arm discontinued therapy before completion because of AEs, whereas only 7% of the patients in the control arm did so. The frequency of serious AEs was also more common in the CEP-701 arm (55%) than in the control arm (45%). By day 30, there were 13 deaths in the CEP-701 arm (12%), versus 7 deaths in the control arm (6%).

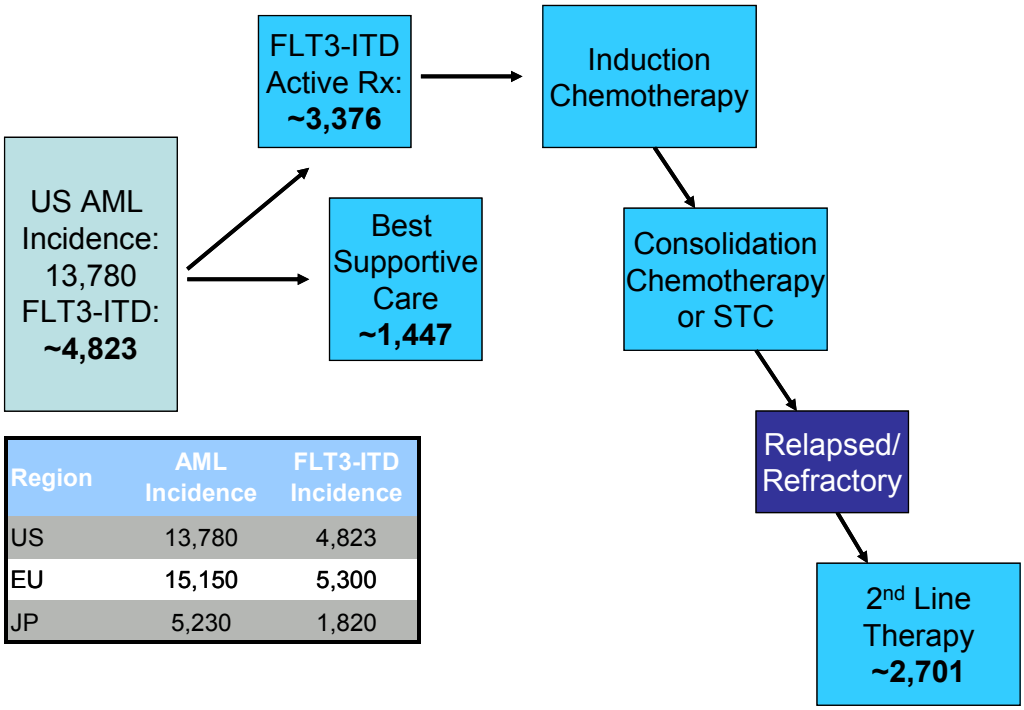
In the publication describing the Cephalon 204 trial (Levis M *et al. Blood* 2011, 117:3294), the authors discussed the possibility that the lack of efficacy by CEP-701 treatment might be attributable to the complex pharmacokinetics of CEP-701. In early-phase studies, it was established that CEP-701 bound strongly to plasma protein *in vivo*, especially to alpha-1 acid glycoprotein (AGP). In the phase 3 trial, increased levels of AGP and FLT3 ligand were observed in the blood of some patients. The authors hypothesized that chemotherapy, which was administered prior to CEP-701 treatment, caused an increase in the concentration of AGP and FLT3 ligand, which in turn caused a decrease in the concentration of CEP-701, resulting in decreased efficacy.

Market Opportunity

Our US market model for quizartinib in AML is based on an annual incidence of roughly 14,000, of which 67% are younger than 60 years of age. We model that 33% of those patients have the FLT-3 mutation and it is the population who are candidates for quizartinib. We believe that quizartinib will be used as second- or third-line treatment. We estimate that quizartinib will be used as a second-line treatment in 55% of the patients who failed front-line treatment. Our third-line forecast is predicated on the basis that 33% of the second-line patients will fail other second-line treatments and will receive quizartinib.

In terms of the patient population 60 years of age and older, we again model that 33% of those patients have the FLT-3 mutation and that they are the target population for quizartinib. We again believe that quizartinib will be used as second- or third-line treatment. In this older population, however, we estimate that quizartinib will be used as a second-line treatment in 30% of the patients who failed front-line treatment. Our third-line forecast in the older population is based on 25% of the second-line patients failing other second-line treatments and receiving quizartinib. We forecast pricing at $10,000 per patient per month with an average dosing duration of five months in the US. We are modeling that Ambit will retain full rights to quizartinib initially and achieve peak sales of more than $75 million in 2025.

Exhibit 34: AML Market Opportunity in the US



Region	AML Incidence	FLT3-ITD Incidence
US	13,780	4,823
EU	15,150	5,300
JP	5,230	1,820

Source: Ambit and BMO Capital Markets.

Overall, in looking at the AML market opportunity in the US we estimate ~3,400 patients that are FLT-3 ITD positive and ~2,700 patients that would be available for second-line therapy. We estimate the US market opportunity for quizartinib at ~$75 million in FLT3-ITD+, second-line+

patients but would note that quizartinib may be used more broadly than the FLT3-ITD+ population and may ultimately gain access to the larger frontline opportunity. We would note that off-label use of other TKI's like NEXAVAR is not necessarily guided by FLT3-ITD status, and as such our estimates for quizartinib opportunity may prove conservative.

In terms of the ROW market, we believe that the addressable market is larger than that of the US, with an annual incidence of 19,000, though the treatment dynamics are similar to those described in the US market above. As a result, with pricing that is on par with that in the US, we are forecasting that ROW sales, which we believe Ambit will partner, will peak in 2025 at nearly $100 million. With a royalty rate that we estimate at 25%, Ambit would receive roughly $25 million in ROW royalties at its peak in 2025, according to our estimates.

Current BMO Capital Markets peak sales estimates of quizartinib of $75 million are based on a probability-adjusted net present value (NPV) for quizartinib of $10 per share. This NPV is based on 60% likelihood of success of quizartinib in the US, with an NPV of $7 and 55% likelihood of success of quizartinib in ROW with an NPV of $3. We would note that existing US biotechnology product companies typically trade at a premium to risk-adjusted NPV estimates and are typically valued on a relative earnings or revenue multiple basis. With its recent IPO, we believe Ambit's cash position has been bolstered to more than $90 million, sufficient to fund operations into 2H15, at which time it may need to access the capital markets.

Pipeline Review

AC410 - JAK2 inhibitor

Ambit's second-most-advanced drug candidate in clinical development, AC410, is a potent, selective, orally-administered, small molecule inhibitor of Janus kinase 2 (JAK2) with potential utilities in autoimmune and inflammatory diseases.

JAK plays a central role in cytokine signaling and controls the activation, proliferation, and survival of various types of immune cells. The JAK family comprises four intracellular tyrosine kinases: JAK1, JAK2, JAK3, and Tyk2. Each family member mediates the signaling of a distinct, but overlapping, subset of cytokines. Dysregulation of the JAK pathway could exacerbate normal inflammation process and contribute to inflammatory diseases. In recent years, JAK inhibitors have gained significant attention in the treatment both of oncology and inflammatory diseases. There are two marketed JAK inhibitors on the market: Novartis and Incyte Corporation's JAKAFI (ruxolitinib), a JAK1/2 inhibitor for the treatment of myelofibrosis, and Pfizer's XELJANZ (tofacitinib), a pan-JAK inhibitor for the treatment of rheumatoid arthritis (RA).

Although much of the clinical development of JAK inhibitors in autoimmune and inflammatory diseases has focused on JAK1 and JAK3, Ambit believes therapeutic opportunities exist for each individual JAK family member because the cytokines that promote inflammation vary across diseases and targeting any single JAK is unlikely to be efficacious in all inflammatory disease.

JAK2 mediates the signaling of IL-6, IL-12, and IL-23, which play key roles in autoimmune diseases, and IL-5, IL-13, and GM-CSF, which play key roles in allergic diseases. The subset of cytokines mediated by JAK2 is distinct from those mediated by JAK1 and JAK3, and therefore a JAK2 inhibitor could potentially deliver positive impact in therapeutic areas not served by other JAK inhibitors.

Ambit plans to advance AC410 to proof-of-concept clinical trials in one or more autoimmune and inflammatory diseases. The cytokines IL-12 and IL-23 play key roles in induction of Th1 and Th17 immune responses, respectively, and are implicated as central mediators in the development of autoimmune disease. Janssen Biotech has developed a monoclonal antibody against IL-12 and IL-23, STELARA (ustekinumab), and this antibody has been shown to be safe and effective in the treatment of psoriasis, and its development in other autoimmune diseases is ongoing. IL-6 is one of the most important mediators in inflammatory responses, and Roche's anti-IL6 mAb, ACTEMRA (tocilizumab), has been shown to be safe and effective in the treatment of rheumatoid arthritis. Therefore, it is conceivable that a small molecule JAK2 inhibitor that blocks IL-6, IL-12, and IL-23 may be able to provide therapeutic benefit in autoimmune diseases such as psoriasis and rheumatoid arthritis.

The cytokine IL-5 plays a crucial role in the proliferation, survival, and trafficking of eosinophils, which are implicated in allergic diseases such as asthma. In clinical trials, GlaxoSmithKline's anti-IL5 mAb, mepoluzimab, has demonstrated a signification reduction in asthma exacerbations and the reliance on corticosteroids in a subpopulation of severe asthma patients. The cytokine IL-13 is believed to be an important mediator in allergen-induced asthma, and several anti-IL13 monoclonal antibodies have shown activity in clinical trials. The cytokine GM-CSF plays an important role in the differentiation, proliferation and survival of granulocytes, including eosinophils, neutrophils, and macrophages. Thus it is conceivable that a small molecule JAK2 inhibitor that blocks IL-5, IL-13, and GM-CSF may be able to provide therapeutic benefit in allergic diseases such as asthma.

Ambit's initial JAK2 inhibitor drug candidate was AC430, which is a racemic mixture of two enantiomers, AC410, and AC409. According to Ambit, AC430 demonstrated robust efficacy in preclinical animal models of arthritic, respiratory, and central nervous system inflammation. Ambit also reported that toxicology studies demonstrated that AC430 was very well tolerated in rats and monkeys.

A dose-ranging phase 1 clinical trial evaluated the safety, pharmacokinetics and pharmacodynamic effects of AC430 in 84 healthy volunteers. Both once-daily dosing and twice-daily dosing regimens of AC430 were evaluated in the multiple ascending dose component of the clinical trial. Ambit reported that AC430 was well tolerated and adverse events were all mild to moderate, with the most common ones being dysguesia (effect on sense of taste), gastrointestinal toxicities, headache, and fatigue. Serious adverse events observed in clinical trials of other JAK inhibitors, including thrombocytopenia (platelet decrease), neutropenia (neutrophil decrease), anemia (red blood cell decrease), and dyslipidemia (LDL increase) were not observed in AC430's phase 1 trial. However, the dosing in this study was of insufficient duration to conclusively determine an absence of these SAEs. Nevertheless, the favorable early signals may translate into a differentiated safety profile of AC410 compared to

other JAK inhibitors. Additionally, Ambit reported that AC430 demonstrated significant and dose-dependent inhibition of JAK2-mediated cytokine signaling at well-tolerated doses in pharmacodynamic/biomarker assays.

Ambit selected AC410 over AC430 and AC409 for further development because of its superior pharmacokinetics as observed in the phase 1 clinical trial. According to Ambit, AC410 demonstrated potent anti-inflammatory effect in a preclinical animal model of arthritic inflammation. In cellular assays, AC410's activity on JAK2 was 40x, 150x, and 20x more potent than its activity on JAK1, JAK3, and TYK2, respectively. Based on preclinical and clinical data, Ambit believes that AC410's safety and activity profile will be substantially similar to that of AC430. Ambit has reported that the FDA has indicated the clinical development of AC410 can continue under AC430's IND without the need to repeat preclinical toxicology studies, contingent on review of the manufacturing process for AC410 by the FDA.

Ambit believes the safety and activity demonstrated in the phase 1 clinical trial supports further development of AC410 as a once-daily oral therapy for autoimmune and inflammatory diseases. The company plans to advance AC410 to proof-of-concept clinical trials in one or more autoimmune and inflammatory diseases, either independently or in collaboration with a strategic partner.

Ambit has obtained a composition of matter patent that contains a chemical genus claim covering AC430 and its enantiomers AC409 and AC410 (US Patent 8,349,851). Ambit also filed a composition of matter application specific to AC410 under the Patent Co-operation Treaty (PCT) in the US, Argentina, and Taiwan, and filed patent applications covering solid forms of AC430 and AC410 in the US.

AC708 - CSF1R Inhibitor

Ambit is currently conducting IND-enabling studies with AC708, a potent and selective small molecule inhibitor of CSF1R, which is a member of the same kinase family as FLT3. Ambit believes AC708 has potential utility in oncology, autoimmune, and inflammatory diseases.

Signaling through CSF1R controls the activation, proliferation, and survival of macrophages, which are key mediators of immune responses. In addition to being an attractive target for autoimmune and inflammatory diseases, such as rheumatoid arthritis and inflammatory bowel disease, CSF1R may also be an important target for cancer treatment.

Recently, tumor associated macrophages, or TAMs, have become increasingly recognized as an important player that affects the microenvironment surrounding tumors. TAMs can release a wide range of growth factors, cytokines, and other inflammatory mediators, that contribute to angiogenesis (blood vessel formation in tumors), survival, and metastasis of tumors. On the other hand, cancer cells secrete a variety of growth factors, including CSF-1 (a cytokine that signals through CSF1R), that are necessary for the survival of macrophages. Ambit believes that inhibition of CSF1R can interrupt the co-dependence between TAMs and tumors, and could complement existing standards of care and improve the treatment of cancer. No currently approved therapies specifically target CSF1R.

While there has been interest in targeting the CSF1R kinase for several years, there is a key challenge in developing a CSF1R-specific inhibitor. CSF1R shares a highly similar structure with FLT3, cKIT, and PDGFR. Therefore a compound targeting CSF1R may have off-target activity on FLT3, cKit, and PDGFR, and could have undesirable side-effects such as myelosuppression (through FLT3 and/or cKit inhibition).

Ambit described the AC708 compound as exquisitely selective for CSF1R, with significantly reduced activity against FLT3, cKIT, and PDGFR. Ambit reported that in vitro and in vivo studies demonstrated potent inhibition of CSF1R, as well as inhibition of macrophage activity and proliferation. Ambit also reported that in initial toxicology studies AC708 were generally well tolerated in rats at exposures significantly higher than necessary to achieve a therapeutic response in patients.

Ambit is conducing preclinical studies of AC708 in oncology and non-oncology disease models. The company plans to further develop this compound either independently or in collaboration with a strategic partner.

CEP-32496 - BRAF Kinase Inhibitor

Ambit discovered CEP-32496 as a small molecule inhibitor for the BRAF kinase. Pursuant to a 2006 collaboration agreement between Ambit and Cephalon (subsequently acquired by Teva), CEP-32496 is now being developed by Teva. Teva has full responsibility for the worldwide development and commercialization of CEP-32496 and Ambit is entitled to receive development, regulatory, and commercialization milestones and sales-based royalty payments.

BRAF is a serine/threonine kinase of the RAS/RAF/MEK/ERK/MAPK pathway, and plays an important role in normal cell growth and survival. The mutations of the BRAF gene can lead to uncontrolled cell growth, and BRAF mutations have been identified in approximately 7% of all cancers. ZELBORAF (vemurafenib), a BRAF kinase inhibitor, was approved by the FDA in 2011 for the treatment of metastatic melanoma patients harboring the V600E BRAF mutation.

According to Ambit, CEP-32496 demonstrated potent and sustained anti-tumor activity in mouse xenograft models of melanoma and colon carcinoma. CEP-32496 is also described as having attractive pharmacokinetic properties upon oral administration and compares favorably to other BRAF kinase inhibitors. Teva submitted an IND for CEP-32496 in oncology in the 2Q12 and, according to Ambit, is preparing for initiation of clinical development of CEP-32496.

Kinase Discovery Platform

Ambit has a proprietary, kinase-focused chemical library that contains approximately 8,000 compounds and these compounds are fully-annotated against a comprehensive kinase panel. This library gives Ambit the ability to rapidly initiate novel kinase inhibitor programs, providing potential for sustainable pipeline expansion.

Management

Michael A. Martino has served as president, chief executive officer, and a member of the board of directors since November 2011. From March 2010 until November 2011, Mr. Martino held multiple positions at CareFusion Corporation, a publicly traded healthcare company, including senior vice president and general manager of diagnostics and senior vice president of innovation, business development, and strategy. From January 2009 to March 2010, Mr. Martino was president and chief executive officer of Arzeda Corp., a privately held enzyme design and development company that he co-founded and for which he remains on the board of directors. From September 1998 to August 2008, Mr. Martino was president and chief executive officer of Sonus Pharmaceuticals, Inc., a publicly traded pharmaceutical development company that merged with Oncogenex Pharmaceuticals, Inc. in August 2008. Earlier in his career, Mr. Martino held multiple positions during a 17-year tenure at Mallinckrodt, Inc. in strategic planning, business development, marketing, and general management. Mr. Martino holds an M.B.A. from Virginia Tech and a B.A. from Roanoke College.

Alan Fuhrman is chief financial officer and has served in this role since October 2010. From November 2008 to September 2010, Mr. Fuhrman was vice president and chief financial officer of Naviscan, Inc., a privately held medical imaging company focused on the management of breast cancer. From September 2004 to August 2008, he was senior vice president and chief financial officer of Sonus Pharmaceuticals, a publicly traded pharmaceutical development company that merged with Oncogenex Pharmaceuticals in August 2008. Mr. Fuhrman was president and chief operating officer of Integrex, Inc., a manufacturing services company, from April 2002 until its acquisition in July 2004. From February 1999 to March 2002, he was the chief financial officer at Capital Stream, Inc., a financial services workflow automation company. Mr. Fuhrman holds B.S. degrees in both business administration and agricultural economics from Montana State University. Mr. Fuhrman received his Certified Public Accountant certification from the State of Oregon but is not an active CPA.

Athena Countouriotis, M.D. has served as Chief Medical Officer since February 2012. From August 2007 to February 2012, Dr. Countouriotis was a clinical leader at Pfizer's Oncology Business Unit. From October 2005 to August 2007, she was director of oncology global clinical research at Bristol-Myers Squibb, with responsibility for leading clinical development of SPRYCEL in acute lymphoblastic leukemia and chronic myeloid leukemia. Earlier in her career, she was an associate medical director at Cell Therapeutics, Inc. a biopharmaceutical company. Dr. Countouriotis holds a B.S. from the University of California, Los Angeles and an M.D. from Tufts University School of Medicine. She received her initial training in pediatrics at the University of California, Los Angeles and additional training at the Fred Hutchinson Cancer Research Center in the Pediatric Hematology/ Oncology Program.

Forecasts

We estimate 2013-2018 per share losses of $(1.92), $(2.03), $(2.18), $(2.31), $(1.25) and $(0.43), respectively. Our forecast calls for Ambit to become profitable in 2019 with EPS of $0.35, increasing to $0.84 in 2020.

Valuation

Our $10/share price target is supported by a sum-of-the-parts, probability adjusted NPV, which estimates value of quizartinib in the US at $7/share, assuming 60% likelihood of success and in the EU of $3/share assuming 55% likelihood of success.

Exhibit 35: AMBI Quizartinib US Market

ACUTE MYELOID LEUKEMIA (AML) - U.S.	2012A	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
U.S. MARKET														
AML Incidence	14,054	14,335	14,621	14,914	15,212	15,516	15,827	16,143	16,466	16,796	17,131	17,474	17,824	18,180
Growth Rate 2.0%														
< 60 years of age	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
New U.S. AML population < 60 years of age	9,416	9,604	9,796	9,992	10,192	10,396	10,604	10,816	11,032	11,253	11,478	11,708	11,942	12,181
% with FLT-3 mutation	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Patients with FLT-3 mutation < 60 years of age	3,107	3,169	3,233	3,297	3,363	3,431	3,499	3,569	3,641	3,713	3,788	3,864	3,941	4,020
2nd-Line Treatment Rate	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%
2nd-Line Eligible Patients	1,538	1,569	1,600	1,632	1,665	1,698	1,732	1,767	1,802	1,838	1,875	1,912	1,951	1,990
2nd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
2nd-Line Patients on Quizartinib	0	0	0	0	0	382	563	751	901	919	937	956	975	995
3rd-Line Treatment Rate	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
3rd-Line Eligible Patients	508	518	528	539	549	560	572	583	595	607	619	631	644	657
3rd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	45.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
3rd-Line Patients on Quizartinib	0	0	0	0	0	126	186	262	297	303	309	316	322	328
Total patients on Quizartinib <60 years of age														
Average Dosing Duration (months)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Monthly Pricing Growth 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%
Quizartinib U.S. Sales (M) < 60 years of age	$ -	$ -	$ -	$ -	$ -	$ 25.4	$ 37.4	$ 50.7	$ 59.9	$ 61.1	$ 62.3	$ 63.6	$ 64.9	$ 66.2
≥60 years	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
New U.S. AML population ≥ 60 years of age	4,638	4,730	4,825	4,922	5,020	5,120	5,223	5,327	5,434	5,543	5,653	5,766	5,882	5,999
% with FLT-3 mutation	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Patients with FLT-3 mutation ≥60 years of age	1,530	1,561	1,592	1,624	1,657	1,690	1,724	1,758	1,793	1,829	1,866	1,903	1,941	1,980
2nd-Line Treatment Rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
2nd-Line Eligible Patients	230	234	239	244	248	253	259	264	269	274	280	285	291	297
2nd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
2nd-Line Patients on Quizartinib	0	0	0	0	0	57	84	112	134	137	140	143	146	148
3rd-Line Treatment Rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
3rd-Line Eligible Patients	57	59	60	61	62	63	65	66	67	69	70	71	73	74
3rd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
3rd-Line Patients on Quizartinib	0	0	0	0	0	14	21	28	34	34	35	36	36	37
Total patients on Quizartinib ≥60 years of age and older	0	0	0	0	0	71	105	140	168	171	175	178	182	186
Average Dosing Duration (months)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Monthly Pricing Growth 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%
Quizartinib U.S. Sales (M) ≥ 60 years of age	$ -	$ -	$ -	$ -	$ -	$ 3.6	$ 5.3	$ 7.0	$ 8.4	$ 8.6	$ 8.7	$ 8.9	$ 9.1	$ 9.3
Total U.S. Quizartinib Sales	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 29.0**	**$ 42.7**	**$ 57.7**	**$ 68.3**	**$ 69.7**	**$ 71.1**	**$ 72.5**	**$ 74.0**	**$ 75.4**
Royalty Rate 100.0%														
Quizartinib U.S. Revenues (M)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 29.0**	**$ 42.7**	**$ 57.7**	**$ 68.3**	**$ 69.7**	**$ 71.1**	**$ 72.5**	**$ 74.0**	**$ 75.4**

Source: Company reports and BMO Capital Markets.

Exhibit 36: AMBI Quizartinib EU Market

ACUTE MYELOID LEUKEMIA (AML) - EU	2012A	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
EU MARKET														
AML Incidence	18,358	18,725	19,100	19,482	19,871	20,269	20,674	21,087	21,509	21,939	22,378	22,826	23,282	23,748
Growth Rate 2.0%														
< 60 years of age	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%	67.0%
New EU AML population < 60 years of age	12,300	12,546	12,797	13,053	13,314	13,580	13,852	14,129	14,411	14,699	14,993	15,293	15,599	15,911
% with FLT-3 mutation	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Patients with FLT-3 mutation < 60 years of age	4,059	4,140	4,223	4,307	4,394	4,481	4,571	4,662	4,756	4,851	4,948	5,047	5,148	5,251
2nd-Line Treatment Rate	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%
2nd-Line Eligible Patients	2,009	2,049	2,090	2,132	2,175	2,218	2,263	2,308	2,354	2,401	2,449	2,498	2,548	2,599
2nd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
2nd-Line Patients on Quizartinib	0	0	0	0	0	499	735	981	1,177	1,201	1,225	1,249	1,274	1,300
3rd-Line Treatment Rate	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
3rd-Line Eligible Patients	663	676	690	704	718	732	747	762	777	792	808	824	841	858
3rd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
3rd-Line Patients on Quizartinib	0	0	0	0	0	165	243	324	388	396	404	412	420	429
Total patients on Quizartinib <60 years of age	0	0	0	0	0	664	978	1,305	1,565	1,597	1,629	1,661	1,694	1,728
Average Dosing Duration (months)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Monthly Pricing Growth 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%
Quizartinib EU Sales (M) < 60 years of age	$ -	$ -	$ -	$ -	$ -	$ 33.2	$ 48.9	$ 65.2	$ 78.3	$ 79.8	$ 81.4	$ 83.1	$ 84.7	$ 86.4
≥60 years	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
New EU AML population ≥ 60 years of age	6,058	6,179	6,303	6,429	6,557	6,689	6,822	6,959	7,098	7,240	7,385	7,532	7,683	7,837
% with FLT-3 mutation	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Patients with FLT-3 mutation ≥60 years of age	1,999	2,039	2,080	2,122	2,164	2,207	2,251	2,296	2,342	2,389	2,437	2,486	2,535	2,586
2nd-Line Treatment Rate	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
2nd-Line Eligible Patients	300	306	312	318	325	331	338	344	351	358	366	373	380	388
2nd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
2nd-Line Patients on Quizartinib	0	0	0	0	0	74	110	146	176	179	183	186	190	194
3rd-Line Treatment Rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
3rd-Line Eligible Patients	75	76	78	80	81	83	84	86	88	90	91	93	95	97
3rd-Line Quizartinib Penetration Rate	0.0%	0.0%	0.0%	0.0%	0.0%	22.5%	32.5%	42.5%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
3rd-Line Patients on Quizartinib	0	0	0	0	0	19	27	37	44	45	46	47	48	48
Total patients on Quizartinib ≥60 years of age and older	0	0	0	0	0	93	137	183	220	224	228	233	238	242
Average Dosing Duration (months)	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Monthly Pricing Growth 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%
Quizartinib EU Sales (M) ≥ 60 years of age	$ -	$ -	$ -	$ -	$ -	$ 4.7	$ 6.9	$ 9.1	$ 11.0	$ 11.2	$ 11.4	$ 11.7	$ 11.9	$ 12.1
Total EU Quizartinib Sales	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 37.8**	**$ 55.8**	**$ 74.4**	**$ 89.3**	**$ 91.0**	**$ 92.9**	**$ 94.7**	**$ 96.6**	**$ 98.5**
Royalty Rate 25.0%														
Quizartinib EU Revenues (M)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 9.5**	**$ 13.9**	**$ 18.6**	**$ 22.3**	**$ 22.8**	**$ 23.2**	**$ 23.7**	**$ 24.2**	**$ 24.6**

Source: Company reports and BMO Capital Markets.

Exhibit 37: AMBI Income Statement 2012A-2025E

INCOME STATEMENT ($M)	2012A	1Q13A	2Q13A	3Q13E	4Q13E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
REVENUES																		
Product Revenues	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 38.4	$ 56.6	$ 76.3	$ 90.6	$ 92.5	$ 94.3	$ 96.2	$ 98.1	$ 100.1
Collaboration agreements	17.6	6.6	-	-	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-
Grant revenue and other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL REVENUES	**$ 17.6**	**$ 6.6**	**$ -**	**$ -**	**$ -**	**$ 6.6**	**$ -**	**$ -**	**$ -**	**$ 38.4**	**$ 56.6**	**$ 76.3**	**$ 90.6**	**$ 92.5**	**$ 94.3**	**$ 96.2**	**$ 98.1**	**$ 100.1**
EXPENSES (GAAP)																		
Cost of Goods Sold (COGS)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1.9	$ 2.8	$ 3.8	$ 4.5	$ 4.6	$ 4.7	$ 4.8	$ 4.9	$ 5.0
R&D Expense	36.7	9.0	5.0	6.0	6.5	26.5	29.0	32.0	33.0	36.0	34.0	34.0	36.0	36.0	36.0	36.0	36.0	4.5
SG&A Expense	6.6	1.8	1.5	2.0	2.0	7.3	8.5	11.0	21.5	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
In-process R&D	-	-																
Other	(2.5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL EXPENSES	40.8	10.8	6.5	8.0	8.5	33.8	37.5	43.0	54.5	67.9	66.8	67.8	70.5	70.6	70.7	70.8	70.9	71.0
Operating Income	**(23.2)**	**(4.2)**	**(6.5)**	**(8.0)**	**(8.5)**	**(27.2)**	**(37.5)**	**(43.0)**	**(54.5)**	**(29.5)**	**(10.2)**	**8.4**	**20.1**	**21.8**	**23.6**	**25.4**	**27.2**	**29.1**
Depreciation and amortization	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EBIT	(23.2)	(4.2)	(6.5)	(8.0)	(8.5)	(27.2)	(37.5)	(43.0)	(54.5)	(29.5)	(10.2)	8.4	20.1	21.8	23.6	25.4	27.2	29.1
Interest and other income	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest and other expense	(1.7)	(0.2)	-	-	-	(0.2)	-	-	-	-	-	-	-	-	-	-	-	-
Other Income (Expense)	(2.3)	(4.0)	-	-	-	(4.0)	-	-	-	-	-	-	-	-	-	-	-	-
Interest and Other Income (Expense)	(4.0)	(4.1)	-	-	-	(4.1)	-	-	-	-	-	-	-	-	-	-	-	-
Pre-Tax Income	(27.2)	(8.3)	(6.5)	(8.0)	(8.5)	(31.3)	(37.5)	(43.0)	(54.5)	(29.5)	(10.2)	8.4	20.1	21.8	23.6	25.4	27.2	29.1
Income Taxes	(0.1)	0.0	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Consolidated Net Income (GAAP)	$ (27.0)	$ (8.3)	$ (6.5)	$ (8.0)	$ (8.5)	$ (31.3)	$ (37.5)	$ (43.0)	$ (54.5)	$ (29.5)	$ (10.2)	$ 8.4	$ 20.1	$ 21.8	$ 23.6	$ 25.4	$ 27.2	$ 29.1
Net loss attibutable to redeemable non-controlling interest	0.4	0.1																
Net loss attibutable to Ambit Biosciences	(26.6)	(8.2)	(6.5)	(8.0)	(8.5)	(31.2)	(37.5)	(43.0)	(54.5)	(29.5)	(10.2)	8.4	20.1	21.8	23.6	25.4	27.2	29.1
Accretion to redemption value of redeemable convertible preferred stock	(3.2)	(2.3)	-	-	-	(2.3)	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of redeemable non-controlling interest	(0.9)	(1.5)	-	-	-	(1.5)	-	-	-	-	-	-	-	-	-	-	-	-
Net Income (GAAP)	**(30.7)**	**(12.0)**	**(6.5)**	**(8.0)**	**(8.5)**	**(35.0)**	**(37.5)**	**(43.0)**	**(54.5)**	**(29.5)**	**(10.2)**	**8.4**	**20.1**	**21.8**	**23.6**	**25.4**	**27.2**	**29.1**
EPS (GAAP) (basic)	$ (16,591.99)	$ (3,019.30)	$ (0.37)	$ (0.44)	$ (0.46)	$ (1.92)	$ (2.03)	$ (2.18)	$ (2.31)	$ (1.25)	$ (0.43)	$ 0.35	$ 0.84	$ 0.91	$ 0.98	$ 1.05	$ 1.12	$ 1.19
EPS (GAAP) (diluted)	**$ (16,591.99)**	**$ (3,019.30)**	**$ (0.37)**	**$ (0.44)**	**$ (0.46)**	**$ (1.92)**	**$ (2.03)**	**$ (2.18)**	**$ (2.31)**	**$ (1.25)**	**$ (0.43)**	**$ 0.35**	**$ 0.84**	**$ 0.91**	**$ 0.98**	**$ 1.05**	**$ 1.12**	**$ 1.19**
Total of Reconciliation Items	0.7	0.4	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-
Net Income (Non-GAAP)	$ (26.3)	$ (7.9)	$ (6.5)	$ (8.0)	$ (8.5)	$ (30.9)	$ (37.5)	$ (43.0)	$ (54.5)	$ (29.5)	$ (10.2)	$ 8.4	$ 20.1	$ 21.8	$ 23.6	$ 25.4	$ 27.2	$ 29.1
Impact of Adjustments to EPS	400.97	99.75	-	-	-	99.75	-	-	-	-	-	-	-	-	-	-	-	-
EPS (Non-GAAP) (basic)	$ (14,225.11)	$ (1,980.95)	$ (0.37)	$ (0.44)	$ (0.46)	$ (1,982.23)	$ (2.03)	$ (2.20)	$ (2.31)	$ (1.25)	$ (0.43)	$ 0.35	$ 0.84	$ 0.91	$ 0.98	$ 1.05	$ 1.12	$ 1.19
EPS (Non-GAAP) (diluted)	$ (14,225.11)	$ (1,980.95)	$ (0.37)	$ (0.44)	$ (0.46)	$ (1,982.23)	$ (2.03)	$ (2.20)	$ (2.31)	$ (1.25)	$ (0.43)	$ 0.35	$ 0.84	$ 0.91	$ 0.98	$ 1.05	$ 1.12	$ 1.19
Weighted average shares outstanding (basic)	0.0	0.0	17.7	18.0	18.4	18.3	18.4	19.7	23.6	23.7	23.8	23.9	23.9	24.0	24.1	24.2	24.3	24.4
Weighted average shares outstanding (diluted)	0.0	0.0	17.7	18.0	18.4	18.3	18.4	19.7	23.6	23.7	23.8	23.9	23.9	24.0	24.1	24.2	24.3	24.4

Source: Company reports and BMO Capital Markets.

Exhibit 38: AMBI Balance Sheet 2012A-2025E

BALANCE SHEET (M)	2012A	1Q13A	2Q13A	3Q13E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Current Assets																	
Cash and cash equivalents	$ 17.5	$ 8.4	$ 92.0	$ 84.1	$ 72.7	$ 35.7	$ 93.2	$ 39.1	$ 10.1	$ 0.3	$ 9.2	$ 29.8	$ 52.1	$ 76.1	$ 102.0	$ 129.6	$ 159.2
Short-term investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total cash, cash equivalents, and short-term investments	$ 17.5	$ 8.4	$ 92.0	$ 84.1	$ 72.7	$ 35.7	$ 93.2	$ 39.1	$ 10.1	$ 0.3	$ 9.2	$ 29.8	$ 52.1	$ 76.1	$ 102.0	$ 129.6	$ 159.2
Restricted Cash	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Accounts Receivables	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Prepaid and other current assets	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Assets held-for-sale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Assets	$ 18.7	$ 10.1	$ 93.7	$ 85.8	$ 74.4	$ 37.4	$ 94.8	$ 40.8	$ 11.7	$ 2.0	$ 10.9	$ 31.5	$ 53.7	$ 77.8	$ 103.6	$ 131.3	$ 160.8
Leasehold improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Property and equipment, net	0.6	0.9	0.8	0.7	0.5	0.1	(0.4)	(0.8)	(1.3)	(1.7)	(2.2)	(2.6)	(3.1)	(3.6)	(4.0)	(4.5)	(4.9)
Patents and licensed technology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intangibles, net	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deposits and other assets	0.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
TOTAL ASSETS	**$ 20.0**	**$ 12.4**	**$ 95.9**	**$ 87.9**	**$ 76.4**	**$ 38.9**	**$ 95.9**	**$ 41.4**	**$ 11.9**	**$ 1.7**	**$ 10.2**	**$ 30.3**	**$ 52.1**	**$ 75.7**	**$ 101.1**	**$ 128.3**	**$ 157.4**
Current Liabilities																	
Accounts payable	7.3	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Accrued payroll	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Liabilities held-for-sale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrued interest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Payables to related parties	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Income taxes payable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current portion of notes payable	4.3	3.1	3.1	3.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Current portion of deferred gain on sale of business	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current portion of deferred revenue	6.4	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Warrant liabilities	10.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Other current liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	$ 29.8	$ 41.9	$ 41.9	$ 41.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9	$ 38.9
Notes payable, net of current portion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other long-term obligations, less current portion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred revenue, less current portion	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Redeemable non-controlling interest	3.3	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Redeemable convertible preferred stock warrant liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commitments and contingencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred rent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL LIABILITIES	$ 47.5	$ 49.4	$ 49.4	$ 49.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4	$ 46.4
Shareholder's Equity																	
Redeemable convertible preferred stock	157.1	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4	159.4
Convertible preferred stock	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
Common stock, at par	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Additional paid-in capital	38.7	35.3	125.3	125.3	125.3	125.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3
Deferred compensation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Notes receivable from shareholders	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unrealized gains (losses) on short-term investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accumulated other comprehensive income	0.0	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Accumulated deficit	(237.0)	(245.2)	(251.7)	(259.7)	(268.2)	(305.7)	(348.7)	(403.2)	(432.7)	(442.9)	(434.4)	(414.3)	(392.5)	(368.9)	(343.5)	(316.3)	(287.3)
TOTAL SHAREHOLDER'S EQUITY (DEFICIT)	$ (27.5)	$ (36.9)	$ 46.6	$ 38.6	$ 30.1	$ (7.4)	$ 49.6	$ (4.9)	$ (34.4)	$ (44.6)	$ (36.2)	$ (16.1)	$ 5.8	$ 29.4	$ 54.7	$ 81.9	$ 111.0
TOTAL LIABILITIES AND SHAREHOLDER'S EQUITY	**$ 20.0**	**$ 12.4**	**$ 95.9**	**$ 87.9**	**$ 76.4**	**$ 38.9**	**$ 95.9**	**$ 41.4**	**$ 11.9**	**$ 1.7**	**$ 10.2**	**$ 30.3**	**$ 52.1**	**$ 75.7**	**$ 101.1**	**$ 128.3**	**$ 157.4**

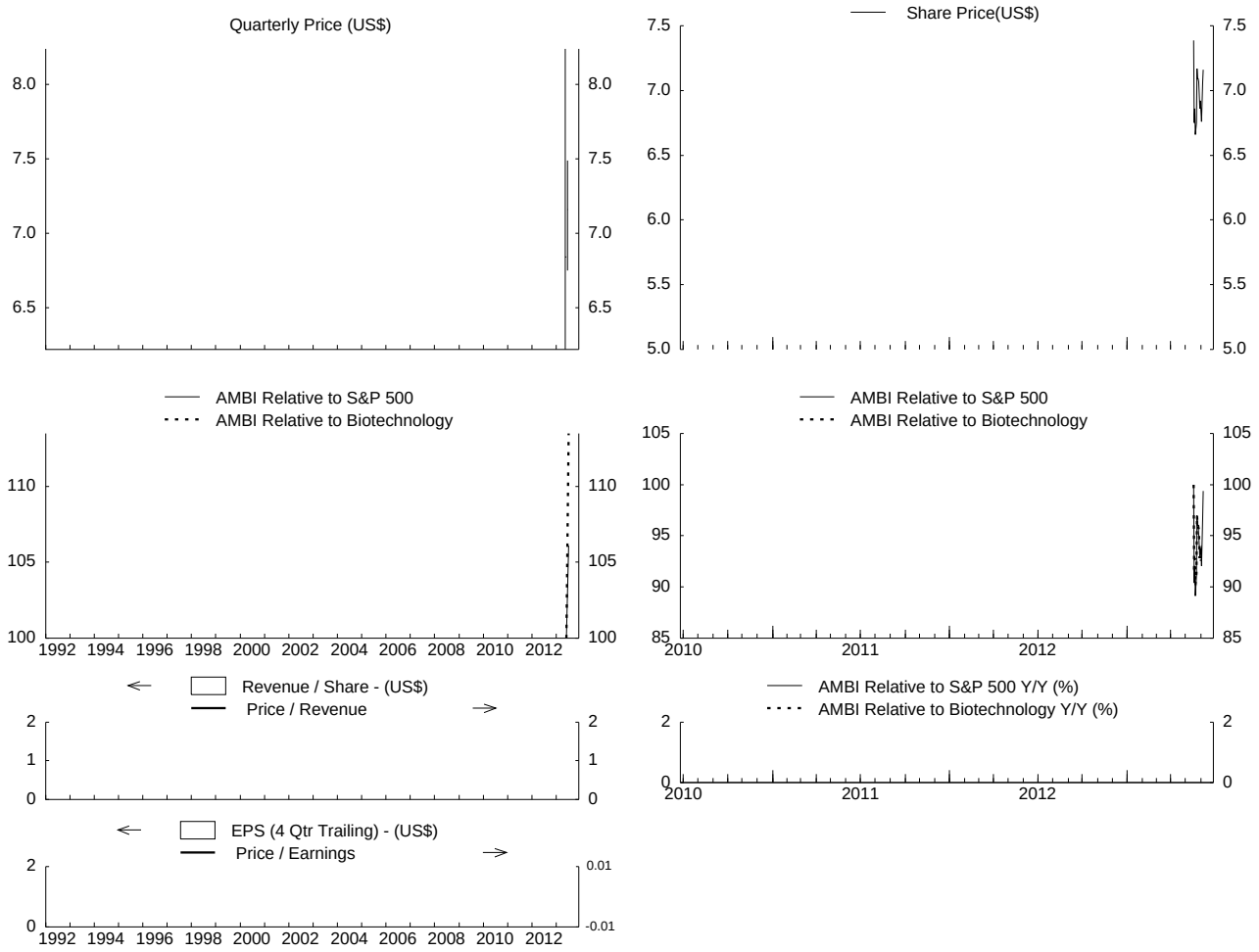
Source: Company reports and BMO Capital Markets.

Exhibit 39: AMBI Cash Flow Statement 2012A-2025E

CASH FLOW STATEMENT (M)	2012A	1Q13A	2Q13E	3Q13E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Cash Flow From Operating Activities																	
Net Income	$ (27.0)	$ (8.3)	$ (6.5)	$ (8.0)	$ (8.5)	$ (10.5)	$ (11.0)	$ (16.0)	$ (6.4)	$ (1.5)	$ 3.3	$ 5.0	$ 5.5	$ 5.9	$ 6.3	$ 6.8	$ 7.3
Adjustments to reconcile net income to cash from operations																	
Depreciation & amortization	0.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Change in fair value of redeemable convertible preferred stock warrant liabilities	2.3	4.0															
In-process research and development expenses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amortization of bond premium and investment income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Noncash interest expense	0.8	0.1															
Bad debt expense	-	-															
Stock-based compensation	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Deferred rent	(0.3)	-															
Loss on disposal of property and equipment	(0.2)	(0.0)															
Deferred revenue	(6.4)	(3.9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	(2.5)	-	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)
Working Capital Adjustments																	
Accounts receivable	3.5	(1.0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prepaid expenses and other current assets	(0.0)	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Assets/liabilities held-for-sale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deposits and other assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Notes receivable from related party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accounts payable and accrued expenses	0.4	(0.7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrued payroll and related expenses	(1.0)	(0.4)															
Other assets and liabilities, net	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Working Capital Increase (Decrease)	$ 2.9	$ (1.5)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL CASH FROM OPERATIONS	$ (28.8)	$ (9.1)	$ (6.4)	$ (7.9)	$ (8.4)	$ (10.4)	$ (10.9)	$ (15.9)	$ (6.2)	$ (1.4)	$ 3.5	$ 5.1	$ 5.6	$ 6.0	$ 6.5	$ 6.9	$ 7.4
Cash From Investing Activities																	
Restricted cash	-	(0.1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maturities and sales of short-term investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purchase of short-term investments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Proceeds from disposals of property and equipment	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Purchases of property and equipment	0.0	(0.4)	(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)
Increase in patents, deposits and other assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL CASH FROM INVESTING	$ 0.0	$ (0.5)	$ (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)
Cash From Financing Activities																	
Proceeds from issuance of common stock	0.0	-	90.0	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-
Net proceeds from issuance of redeemable convertible preferred stock	22.0	-															
Proceeds from issuance of put shares	(0.0)	2.7															
Proceeds from notes payable	13.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Payments on notes payable	(4.8)	(1.3)			(3.0)												
Costs paid in connection with initial public offering	(0.3)	(0.8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-															
TOTAL CASH FROM FINANCING	$ 29.8	$ 0.7	$ 90.0	$ -	$ (3.0)	$ -	$ 100.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effect of exchange rate changes in cash	0.0	(0.1)															
Increase (decrease) in cash and cash equivalents	1.1	(9.1)	83.6	(7.9)	(11.4)	(10.4)	89.1	(15.9)	(6.2)	(1.4)	3.5	5.1	5.6	6.0	6.5	6.9	7.4
Cash and cash equivalents at beginning of year	9.7	17.5	8.4	92.0	84.1	46.1	4.0	55.0	16.3	1.7	5.8	24.7	46.5	70.1	95.5	122.7	151.8
Cash and cash equivalents at end of year	$ 10.8	$ 8.4	$ 92.0	$ 84.1	$ 72.7	$ 35.7	$ 93.2	$ 39.1	$ 10.1	$ 0.3	$ 9.2	$ 29.8	$ 52.1	$ 76.1	$ 102.0	$ 129.6	$ 159.2

Source: Company reports and BMO Capital Markets.

Ambit Biosciences (AMBI)



FYE (Dec.)	EPS US$	P/E Hi - Lo	DPS US$	Yield% Hi - Lo	Payout %	BV US$	P/B Hi - Lo	ROE %
Range*:		na na		NC			>15 >15	
Current*	ND	na	0.00	0.0	na	NA	NA	na

AMBI - Rating as of 4-Jun-13 = NR

* Current EPS is the 4 Quarter Trailing to Q4/2012.
* Valuation metrics are based on high and low for the fiscal year.
* Range indicates the valuation range for the period presented above.

Last Price (June 5, 2013): $7.16
Sources: IHS Global Insight, Thomson Reuters, BMO Capital Markets.

Important Disclosures

Analyst's Certification

I, Jim Birchenough, M.D., hereby certify that the views expressed in this report accurately reflect my personal views about the subject securities or issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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Disclosure 1: BMO Capital Markets has undertaken an underwriting liability with respect to this issuer within the past 12 months.
Disclosure 2: BMO Capital Markets has provided investment banking services with respect to this issuer within the past 12 months.
Disclosure 3: BMO Capital Markets has managed or co-managed a public offering of securities with respect to this issuer within the past 12 months.
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Disclosure 6: This issuer is a client (or was a client) of BMO Nesbitt Burns Inc., BMO Capital Markets Corp., BMO CM Ltd. or an affiliate within the past 12 months: Investment Banking Services.

Methodology and Risks to Our Price Target/Valuation

Methodology: Our $10/share price target is supported by a sum-of-the-parts, probability adjusted NPV which estimates value of quizartinib in the US at $7/share assuming 60% likelihood of success and in the EU of $3/share assuming 55% likelihood of success.
Risks: There are a number of risks associated with investment in biotechnology companies. These risks include, but are not limited to, risk of clinical trial delay or failure, adverse regulatory decisions including product non-approval, unanticipated adverse effects of drugs which may result in removal from market, risk of manufacturing difficulties, capital market risk which may impair the ability to fund product discovery, research, regulatory filing, manufacture and/or commercialization, risk in attaining and retaining appropriate development or commercial partners, lower-than-expected product adoption, difficulties in gaining appropriate reimbursement for products from payors, unforeseen generic and branded competition, risk to patents being invalidated, and failure to meet earnings and revenue expectations.

Distribution of Ratings (March 31, 2013)

Rating Category	BMO Rating	BMOCM US Universe*	BMOCM US IB Clients**	BMOCM US IB Clients***	BMOCM Universe****	BMOCM IB Clients*****	Starmine Universe
Buy	Outperform	37.3%	16.5%	53.8%	38.2%	51.3%	53.2%
Hold	Market Perform	58.0%	8.8%	44.6%	56.8%	47.7%	41.1%
Sell	Underperform	4.7%	3.7%	1.5%	4.9%	1.0%	5.7%

* Reflects rating distribution of all companies covered by BMO Capital Markets Corp. equity research analysts.
** Reflects rating distribution of all companies from which BMO Capital Markets Corp. has received compensation for Investment Banking services as percentage within ratings category.
*** Reflects rating distribution of all companies from which BMO Capital Markets Corp. has received compensation for Investment Banking services as percentage of Investment Banking clients.
**** Reflects rating distribution of all companies covered by BMO Capital Markets equity research analysts.
***** Reflects rating distribution of all companies from which BMO Capital Markets has received compensation for Investment Banking services as percentage of Investment Banking clients.

Rating and Sector Key (as of April 5, 2013)

We use the following ratings system definitions:
OP = Outperform - Forecast to outperform the analyst's coverage universe on a total return basis;
Mkt = Market Perform - Forecast to perform roughly in line with the analyst's coverage universe on a total return basis;
Und = Underperform - Forecast to underperform the analyst's coverage universe on a total return basis;
(S) = Speculative investment;
NR = No rating at this time; and
R = Restricted – Dissemination of research is currently restricted.

BMO Capital Markets' seven Top 15 lists guide investors to our best ideas according to different objectives (CDN Large Cap, CDN Small Cap, US Large Cap, US Small Cap, Income, CDN Quant, and US Quant have replaced the Top Pick rating).

Prior BMO Capital Markets Rating System (January 4, 2010 – April 4, 2013):
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