CLINICAL STUDY REPORT SYNOPSIS

Study Title:	A Phase IIB, Randomized, Double-Blinded, Placebo-Controlled Study of Low Dose Cytarabine and Lintuzumab Compared to Low Dose Cytarabine and Placebo in Patients 60 Years of Age and Older with Previously Untreated AML
Brief Title:	A Study of Lintuzumab (SGN-33) in Combination With Low Dose Cytarabine in Patients 60+ Years With AML
Investigational Product:	Lintuzumab (SGN-33, HuM195)
Indication:	Acute Myeloid Leukemia
Phase:	Phase 2
Protocol Number:	SG033-0003 ClinicalTrials.gov Identifier: NCT00528333
Study Initiation Date:	First patient enrolled: 07-Nov-2007
Study Completion Date:	Last patient visit: 26-Aug-2010
Study Report Date:	04-Apr-2011
Sponsor:	Seattle Genetics, Inc. 21823 30th Drive SE Bothell, WA 98021, USA
Collaborator:	Not applicable
Medical Monitor:	[redacted]
Good Clinical Practice:	This study was conducted in accordance with applicable Food and Drug Administration (FDA) regulations/guidelines set forth in 21 CFR Parts 11, 50, 54, 56, and 312 and with International Conference on Harmonisation (ICH) Good Clinical Practice (GCP) guidelines. Essential documents will be retained in accordance with ICH GCP.

Sponsor	**Name of Finished Product**
Seattle Genetics, Inc. 21823 30th Drive SE Bothell, WA 98021, USA	Lintuzumab Injection (HuM195) **Name of Active Ingredient** Lintuzumab (SGN-33, HuM195)

Study Title

A Phase IIB, Randomized, Double-Blinded, Placebo-Controlled Study of Low Dose Cytarabine and Lintuzumab Compared to Low Dose Cytarabine and Placebo in Patients 60 Years of Age and Older with Previously Untreated AML

Phase

Phase 2

Study Center(s) and Investigator(s)

Patients were enrolled at 72 sites: 12 sites in the United States, 24 sites in Russia, and 36 sites in the rest of the world (Austria, Bosnia and Herzegovina, Bulgaria, Hungary, Lithuania, Poland, Romania, Serbia, and Ukraine).

Publication(s) Based on the Study

None.

Study Period

34 months

Date first patient enrolled: 07-Nov-2007

Date of last patient visit: 26-Aug-2010

Study Objectives

Primary: To determine whether combination treatment with low dose cytarabine and lintuzumab confers a survival benefit over treatment with low dose cytarabine and placebo in patients 60 years of age and older with previously untreated AML.

Additional:

- To compare the safety and tolerability of combined therapy of low dose cytarabine and lintuzumab to low dose cytarabine alone.
- To determine the lintuzumab pharmacokinetic profile and immunogenicity in older patients with previously untreated AML.
- To assess infections which require hospitalization or IV antibiotics, transfusion requirements (platelets and red blood cells), complete blood cell counts (CBC), and quality of life in this population.

Methodology

This was a phase 2b, randomized, double-blinded, placebo-controlled trial to evaluate overall survival in older patients (≥60 years) with AML. Patients were randomly assigned in a 1:1 ratio to 1 of 2 treatment arms, low-dose cytarabine in combination with lintuzumab or low-dose cytarabine in combination with placebo. Randomization was stratified by age (<70 years or ≥70 years), history of antecedent hematologic disorder (yes or no), and Eastern Cooperative Oncology Group (ECOG) performance status (0-1 or 2).

Patients could have received up to twelve 28-day cycles of treatment. During all cycles, patients received cytarabine (20 mg subcutaneously [SC] twice daily) on Days 1-10. For Cycle 1 only, patients received study drug (lintuzumab 600 mg or placebo) intravenously (IV) once weekly (on Days 1, 8, 15, and 22). For all subsequent cycles, patients received lintuzumab or placebo IV once every other week (on Days 1 and 15).

A maximum of 12 treatment cycles was administered. After treatment was completed, patients remained on study and were followed for approximately 12 months or longer, or until death or study closure.

Concomitant Medications

- All patients were premedicated with acetaminophen and diphenhydramine or equivalent prior to each infusion. Patients received additional premedication on Day 1 of Cycle 1 only, consisting of methylprednisolone or dexamethasone. Routine pretreatment with corticosteroids prior to subsequent infusions was discouraged unless a patient previously experienced a Grade 3 infusion reaction.
- Supportive care in accord with the National Comprehensive Cancer Network (NCCN) guidelines for AML (e.g., prophylactic antimicrobial therapy, transfusions of red blood cells (RBC) and platelets, and hematopoietic growth factors) was recommended.

Number of Patients

Planned: Approximately 210 patients.

Randomized and analyzed: 211 patients.

Diagnosis and Primary Criteria for Inclusion

Key Inclusion Criteria

- Untreated, morphologically confirmed AML (as defined by the World Health Organization) that occurred de novo, after exposure to chemotherapy for a separate malignancy, or evolved from an antecedent hematologic disorder.
- Age ≥60 years, ECOG performance status ≤2, and white blood cell count <30,000/µL.
- At least 20% blasts in blood or marrow, with ≥50% of leukemic blasts expressing CD33.

Key Exclusion Criteria

- Diagnosis of acute promyelocytic leukemia or chronic myeloid leukemia.
- Other active non-hematologic malignancies treated with chemotherapy within the last 12 months, with the exception of AML that evolved from myelodysplastic syndrome.
- Inadequate renal and/or hepatic function.
- Life-threatening infection or positive blood culture within 7 days, or human immunodeficiency virus (HIV) infection.
- Taking chronic systemic steroids >7.5 mg/day prednisone or equivalent, or other chronic systemic immunosuppressive medication.

Test Product, Dose, Mode of Administration

Lintuzumab (SGN-33); 600 mg per dose; IV infusion using a 0.22 micron in-line filter to prevent the infusion of particulates if present in the vial.

Reference Product, Dose, Mode of Administration

Placebo; IV infusion.

Combination Therapy

Cytarabine; 20 mg twice daily; SC on Days 1-10 of each cycle.

Duration of Treatment

Patients could receive a total of twelve 28-day cycles.

Criteria for Evaluation

The following parameters were to be assessed.

Efficacy:

- Primary
  - Overall survival (OS)
- Secondary
  - Transfusion requirements – platelet or RBC
  - Infections or fevers of unknown origin requiring hospitalization or IV antibiotics
  - Complete blood counts – absolute neutrophil cell (ANC) counts, platelet counts, hemoglobin, blasts
- Additional
  - Quality of life assessment – Functional Assessment of Cancer Therapy, Leukemia (FACT-Leu)
  - Clinical benefit - defined as no peripheral blasts, ANC >1.0 x 10^9/L, platelets >100 x 10^9/L, and no transfusions for one week

Pharmacokinetics/Pharmacodynamics and Immunogenicity:

- Pharmacokinetic profile
- Human anti-human antibody (HAHA)

Safety:

- Adverse events (AEs)
- Clinical laboratory values

Statistical Methods

The sample size for this Phase 2b screening trial was calculated using the method of Fleming and Richardson (J Infect Dis. 2004;190:666). Reliable estimation of efficacy may be achieved with a phase 2b screening trial with one-fourth to one-third of the number of events required for a phase 3 trial evaluating the same primary efficacy endpoint. The sample size of a single phase 3 trial designed to support approval was first calculated using an alpha level of 0.001 and 90% power. Based on that calculation, a total of 186 events was needed for this phase 2b screening trial. This number of events could be obtained by enrolling 105 patients per treatment arm (back calculated using a 2-sided alpha of 0.31). A patient accrual period of 17 months and follow-up of at least 12 months (29 months total) and an 8-week treatment-associated increase in median survival (from 5 to 7 months, exponential parameters of 0.1386 and 0.0990, respectively, or hazard ratio of 0.714) were assumed. At 29 months with 105 patients per treatment arm, approximately 186 events (i.e., deaths) were anticipated. The sample size of 186 events provided approximately a 15% probability of observing a hazard ratio ≤0.86 if there was no benefit associated with lintuzumab treatment (i.e., false-positive result) and was associated with approximately a 90% chance of observing a hazard ratio of ≤0.86 (equivalent to a 2-sided significance level ≤0.31) if the assumed treatment effect existed (i.e., 8-week survival benefit with lintuzumab; median survival of 5 vs. 7 months). If the observed hazard ratio was >0.86, lintuzumab treatment would be considered unlikely to be successful.

The intent-to-treat (ITT) population included all randomized patients; patients were analyzed based on randomization assignment regardless of the treatment actually received. The safety population included all randomized patients who received at least one dose of study drug; patients in the safety population were analyzed based on the treatment actually received.

The primary efficacy analysis of OS used the ITT population and included all source-verified deaths in the database at the time of database lock. Treatment difference in OS was evaluated using an unstratified log-rank test. The hazard ratio was estimated using a Cox model with treatment arm as the only covariate. The median survival time for each treatment arm was estimated using the Kaplan-Meier method.

Secondary and additional efficacy endpoints also were analyzed using the ITT population. All P values from inferential tests were 2-sided. In the event of a statistically significant result for the primary analysis of the primary endpoint (based on log-rank test) at a significance level of 0.31, analyses were to be performed on the secondary efficacy endpoints, with adjustments for multiplicity to guarantee an overall alpha level of 0.31.

No formal interim analyses of efficacy were planned or conducted.

RESULTS SUMMARY

Patient Disposition

A total of 211 patients were enrolled and randomized in the study (107 lintuzumab, 104 placebo). Overall, 38 patients (18%) were enrolled at study sites in the United States, 70 patients (33%) were enrolled in Russia, and 103 patients (49%) were enrolled in the rest of the world.

A total of 210 patients received at least one dose of study drug; one patient was randomized to the lintuzumab arm, but died before receiving treatment. Two patients in the placebo arm were incorrectly treated with lintuzumab. Thus 102 patients received placebo and 108 patients received at least 1 dose of lintuzumab.

Among the 211 randomized patients, 41 patients (19%) completed 12 cycles of treatment and 170 patients discontinued study treatment: 70 patients (33%) discontinued due to death (34% lintuzumab, 33% placebo), 68 (32%) due to insufficient clinical benefit (24% lintuzumab, 40% placebo), 30 (14%) due to AE (22% lintuzumab, 6% placebo), and 2 (0% lintuzumab, 1% placebo) due to other reasons. At the time of study termination, 187 patients (89%) had died, 2 patients (1%) had withdrawn consent, and 22 patients (10%) remained on study in follow-up.

Key Demographics and Baseline Characteristics

The median age of the 211 patients in the study was 70 years (range, 60 to 90); 119 patients (56%) were at least 70 years of age, and 17 patients (8%) were at least 80 years of age. One hundred patients (47%) were male and 207 (98%) were white. Fifteen patients (7%) had an ECOG status of 0, 101 patients (48%) had an ECOG status of 1, and 95 patients (45%) had an ECOG status of 2 at baseline. Forty-nine patients (23%) had a history of antecedent hematologic disorder.

The WHO classification of disease was AML with multilineage dysplasia for 56 patients (27%), AML with MDS for 4 patients (2%), AML with recurrent genetic abnormalities for 9 patients (4%), and AML not otherwise categorized for 142 patients (67%). Baseline percentages of blasts were <20% for 3 patients (1%, in violation of entry criteria), 20-29% for 51 patients (24%), and ≥30% for 157 patients (74%). The median percentage of CD33-positive blasts was 95.3% (range, 55-100%) in bone marrow and 94.9% (range, 51-100%) in peripheral blood. The cytogenetic risk group was low risk for 1 patient (<1%), standard risk for 88 patients (42%), high risk for 87 patients (41%), and not applicable for 35 patients (17%). Using the Wheatley prognostic score, 18 patients (9%) were categorized as good risk, 50 patients (24%) as standard risk, and143 patients (68%) as poor risk.

The treatment arms appeared to be balanced in age, gender, race, ethnicity, and Wheatley prognostic score. Minor differences were observed between treatment arms in cytogenetic risk factors, with a higher proportion of patients in the lintuzumab arm categorized as high risk (48% vs. 35% placebo). Additionally, the proportion of patients with baseline blast percentage ≥30% was higher in the lintuzumab arm (83% vs. 65% placebo).

Randomization was stratified by age (<70 years or ≥70 years), history of antecedent hematologic disorder (yes or no), and ECOG performance status (0-1 or 2). Twenty-two patients (9 lintuzumab, 13 placebo) were randomized with incorrect stratification factors. Stratified analyses using both the stratification factors entered at randomization and the actual stratification factors documented at baseline resulted in the same conclusions as the primary unstratified analyses. The treatment arms appeared to be balanced across actual stratification factors.

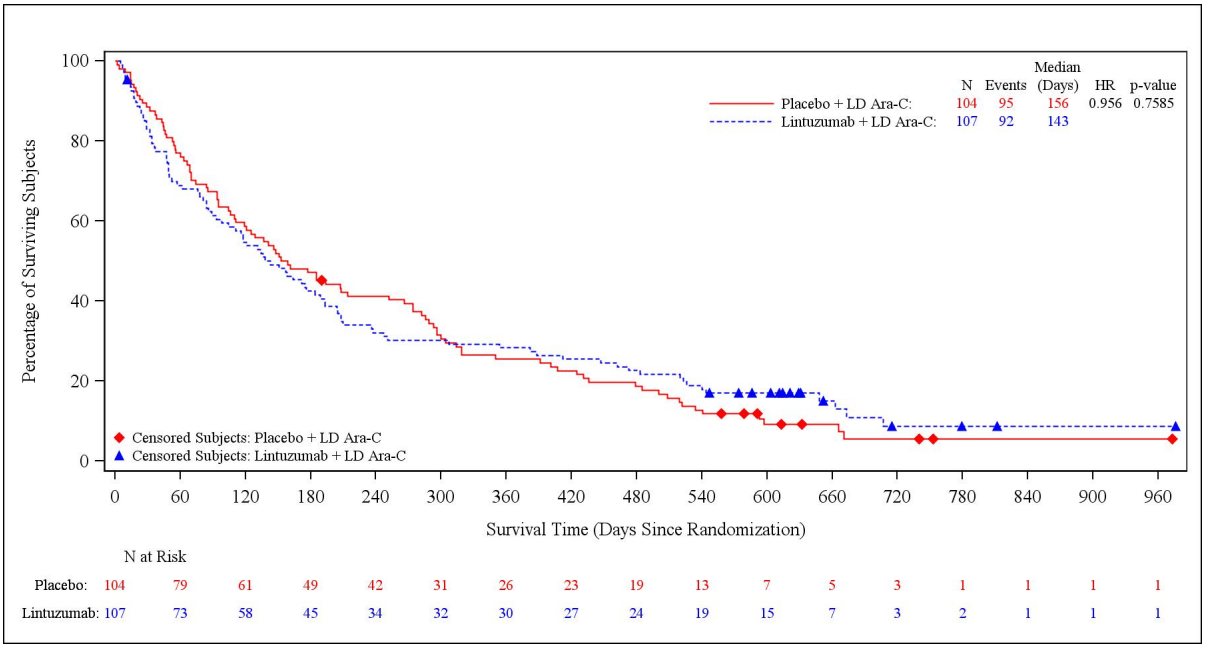
Pharmacokinetic, Pharmacodynamic, and Immunogenicity Results

Plasma concentrations of lintuzumab, assessed for patients in the lintuzumab arm, were summarized descriptively by timepoint.

One-hundred and six patients had HAHA data available for at least 1 timepoint. No specific immune response against lintuzumab was detected; however, lintuzumab in the sample may have interfered with detection of HAHA.

Efficacy Results

Primary Endpoint: A total of 187 patients died, including one patient who did not receive treatment; data for the other 24 patients (15 lintuzumab, 9 placebo) were censored. The primary efficacy analysis of overall survival yielded a hazard ratio (lintuzumab to placebo) of 0.96, equivalent to a 4% decrease in the hazard of death for patients in the lintuzumab arm. The estimated median survival for the lintuzumab arm was 4.7 months compared to 5.1 months for the placebo arm, and the survival rate at each prespecified timepoint did not appear to be different between the 2 treatment arms. Survival was not significantly prolonged with lintuzumab plus low-dose cytarabine as compared to placebo plus low-dose cytarabine (P value = 0.7585, 95% confidence interval 0.72 to 1.28). The result was not statistically significant at the 0.31 (2-sided) level, indicating that lintuzumab was unlikely to be associated with a positive treatment effect.



Subgroup analyses of overall survival were conducted for age (<70 or ≥70 years), gender, ECOG performance status (0-1 or 2), region (United States, Russia, or the rest of the world), blast percentage at baseline (<20%, 20-29%, or ≥30%), Wheatley risk group (good, standard, or poor), history of antecedent disorder (yes or no), cytogenetics (low, standard, or high risk, or not applicable), percent CD33-positive cells (<75% or ≥75%), white blood cell counts (≤20 x 10^9/L or >20 x 10^9/L), LDH (≤700 U/L or >700 U/L), and Fcγ polymorphisms (Fcγ rIIa H/H, H/R or R/H, or RR and Fcγ rIIIa F/F, F/V or V/F, or V/V).

The hazard ratios for most subgroups were close to 1. The 95% confidence intervals included 1, with the exception of the subgroup of patients with <75% CD33-positive blasts. In this subgroup, the estimated hazard ratio was 0.4; this disparity is most likely due to small numbers (n=29). Upon further investigation using a CD33-positive cut-off of 95% (closer to the median), this disparity was no longer apparent. The hazard ratio for patients with antecedent hematologic disorder was 0.58, suggesting a potential lintuzumab treatment effect in this small subgroup (n=49); however, 1 was included in the 95% confidence interval.

Secondary Endpoints: As specified in the Statistical Analysis Plan, no formal comparisons of secondary efficacy endpoints were performed, as the primary endpoint was not statistically significant at the 0.31 (2-sided) level. No clinically meaningful differences were observed in any of the secondary efficacy endpoints.

- The rate (per patient year) of platelet transfusions was 28.4 transfusions in the lintuzumab arm, compared to 28.3 transfusions in the placebo arm. The rate (per patient year) of RBC transfusions was 27.7 transfusions in the lintuzumab arm, compared to 26.8 transfusions in the placebo arm.
- Sixty-eight percent of patients in each treatment arm had infections or fevers of unknown origin requiring hospitalization or IV antibiotics; the rate (per patient year) was 3.9 in the lintuzumab arm compared to 3.7 in the placebo arm.
- No consistent patterns of changes were observed for ANC, platelet count, hemoglobin, and percentage of blasts; the median change from baseline was similar for both treatment arms and the range of values for the 2 treatment arms overlapped considerably at each timepoint.

Additional Endpoints: No clinically meaningful differences were apparent for additional efficacy endpoints.

- No consistent pattern of change in FACT-Leu score was observed; the median change from baseline was similar for both treatment arms and the range of values for the 2 treatment arms overlapped considerably at each timepoint.
- Clinical benefit was defined as no peripheral blasts, ANC >1.0 x 10^9/L, platelets >100 x 10^9/L, and no transfusions for one week. Twenty-nine patients (27%) in the lintuzumab arm and 30 patients (29%) in the placebo arm experienced clinical benefit.

Safety Results

Overall, the median number of treatment cycles received in the study was 4.0 (range, 1 to 12). The median number of treatment cycles (4.0 lintuzumab, 3.0 placebo) and the total duration of exposure (46.7 patient-years lintuzumab, 45.9 patient-years placebo) were comparable between treatment arms. Forty-one patients completed 12 cycles of treatment in the study: 21 (20%) in the lintuzumab arm and 20 (19%) in the placebo arm. The proportion of patients with at least one dose interruption was higher in the lintuzumab arm (45% vs. 4% placebo). Dose delays were reported for 32% of patients in each treatment arm.

Compliance with cytarabine dosing was generally good: 195 patients (93%) received at least 75% of planned doses over all treatment cycles. The proportion of patients receiving at least 75% of planned cytarabine doses was typically >95% for individual treatment cycles.

Two-hundred and nine patients (>99%) had at least 1 treatment-emergent AE during the study. The most common AEs were thrombocytopenia (42%), AML (36%), pyrexia and neutropenia (32% each), and anemia (31%). Overall, the incidence of AEs did not appear to be different between the study arms.

Notable treatment-emergent AEs that were observed in a higher proportion of patients in the lintuzumab arm were cough (18% vs. 11% placebo), chills (21% vs. 4% placebo), peripheral edema (14% vs. 8% placebo), dyspnea (14% vs. 5% placebo), hypotension (11% vs. 5% placebo), pain in extremity (10% vs. 3% placebo), hyperthermia (8% vs. 2% placebo), and hypersensitivity (8% vs. 0% placebo); these events were likely associated with hypersensitivity/infusion reactions related to lintuzumab.

Adverse events occurring in at least 10% of patients overall

	Lintuzumab (N=108) n (%)	Placebo (N=102) n (%)	Total (N=210) n (%)
Thrombocytopenia	44 (41)	44 (43)	88 (42)
Acute myeloid leukemia	42 (39)	34 (33)	76 (36)
Pyrexia	33 (31)	35 (34)	68 (32)
Neutropenia	32 (30)	35 (34)	67 (32)
Anemia	30 (28)	35 (34)	65 (31)
Febrile neutropenia	32 (30)	27 (26)	59 (28)
Nausea	20 (19)	28 (27)	48 (23)
Pneumonia	24 (22)	24 (24)	48 (23)
Hypokalemia	21 (19)	12 (12)	33 (16)
Asthenia	13 (12)	18 (18)	31 (15)
Cough	19 (18)	11 (11)	30 (14)
Diarrhea	16 (15)	14 (14)	30 (14)
Vomiting	15 (14)	13 (13)	28 (13)
Chills	23 (21)	4 (4)	27 (13)
Epistaxis	11 (10)	12 (12)	23 (11)
Peripheral edema	15 (14)	8 (8)	23 (11)
Fatigue	11 (10)	11 (11)	22 (10)
Decreased appetite	10 (9)	11 (11)	21 (10)
Dyspnea	15 (14)	5 (5)	20 (10)
Sepsis	11 (10)	9 (9)	20 (10)

Events considered related to study drug (lintuzumab or placebo) were reported for 72 patients (67%) in the lintuzumab arm, and 49 patients (48%) in the placebo arm. Related AEs that occurred in at least 10% of patients overall were chills (19% lintuzumab, 1% placebo), thrombocytopenia (14% lintuzumab, 25% placebo), neutropenia (11% lintuzumab, 19% placebo), febrile neutropenia (9% lintuzumab, 11% placebo), and anemia (6% lintuzumab, 16% placebo). Events related to cytarabine occurred in a higher proportion of patients in the placebo arm (75% vs. 58% lintuzumab).

Overall, 89% of patients had at least one AE ≥ Grade 3 (90% lintuzumab, 87% placebo). AEs ≥ Grade 3 that occurred in at least 10% of patients were thrombocytopenia (36%), AML (35%), anemia (22%), neutropenia (22%), febrile neutropenia (20%), and pneumonia (12%). The incidence of Grade 3 or higher treatment-emergent AEs did not appear to be clinically different between the study arms.

Adverse events ≥ Grade 3 occurring in at least 10% of patients overall

	Lintuzumab (N=108) n (%)	Placebo (N=102) n (%)	Total (N=210) n (%)
Thrombocytopenia	39 (36)	36 (35)	75 (36)
Acute myeloid leukemia	42 (39)	32 (31)	74 (35)
Anemia	22 (20)	25 (25)	47 (22)
Neutropenia	21 (19)	26 (25)	47 (22)
Febrile neutropenia	23 (21)	18 (18)	41 (20)
Pneumonia	16 (15)	10 (10)	26 (12)

Serious adverse events (SAEs) were experienced by 91 patients (84%) in the lintuzumab arm and 77 patients (75%) in the placebo arm. Three SAEs were reported in at least 10% of patients overall: AML (71 patients, 34%), pneumonia (27 patients, 13%), and febrile neutropenia (24 patients, 11%). The incidence of specific SAEs was generally similar between study arms. Notable exceptions were events of AML (38% lintuzumab, 29% placebo) and pneumonia (15% lintuzumab, 11% placebo).

SAEs considered related to study drug were reported for 21% of patients in each treatment arm; the incidence of SAEs related to cytarabine was slightly lower in the lintuzumab arm (21% vs. 29% placebo).

Death was reported for a total of 186 patients (89%) in the safety population; 110 patients (52%) died within 30 days of last study treatment. AML was reported as the primary cause of death for 95 patients (45% of the overall population) and as a contributing cause for 8 patients (4%). Other known primary causes of death reported for more than 5 patients (2%) were sepsis (11 patients, 5%) and hemorrhagic stroke (8 patients, 4%).

Twenty-four patients (22%) had an AE leading to discontinuation of treatment in the lintuzumab arm, compared to 6 patients (6%) in the placebo arm. Adverse events that led to treatment discontinuation for more than one patient were AML (7 patients, 3%), pneumonia (3 patients, 1%), cerebral hemorrhage (2 patients, 1%), and hypersensitivity (2 patients, 1%). With the exception of 1 patient in the placebo arm who discontinued treatment due to cerebral hemorrhage, all these events occurred in the lintuzumab arm.

Infusion-related AEs were reported for 55 patients (51%) in the lintuzumab arm and 7 patients (7%) in the placebo arm. The most common infusion-related AEs in the lintuzumab arm were chills (21 patients, 19%) and pyrexia (11 patients, 10%). Other infusion-related AEs reported for more than 2 patients in the lintuzumab arm were dyspnea, hypersensitivity, hypertension, hyperthermia, and hypotension (6 patients, 6% each); vomiting (5 patients, 5%); hyperhidrosis (4 patients, 4%); and cough and tachycardia (3 patients, 3% each).

No clinically meaningful differences in hematology results were observed between treatment arms. Overall, a highest postbaseline Grade 3 or 4 hematologic abnormality was observed for low platelet count (189 patients, 90%), low ANC (171 patients, 81%), low white blood cell count (138 patients, 66%), low hemoglobin (121 patients, 58%), and low lymphocyte count (52 patients, 25%). The proportion of patients who experienced Grade 4 hematologic abnormalities was similar across treatment arms, with the exception of hemoglobin (12% lintuzumab, 25% placebo). No obvious pattern of change over time was apparent for ANC, platelet count, hemoglobin, or percentage of blasts.

Grade 3 or 4 chemistry results were reported for at least 5% of patients overall for high uric acid and low calcium, potassium, and phosphorus. Patients in the lintuzumab arm had a higher incidence of Grade 3 or 4 high uric acid (13% vs. 6% placebo) and low calcium (7% vs. 3% placebo). The proportion of patients who experienced Grade 4 chemistry abnormalities was similar across treatment arms, with the exception of low potassium (7% lintuzumab, 1% placebo).

CONCLUSIONS

Overall survival, the primary efficacy endpoint, was not significantly prolonged with lintuzumab plus low-dose cytarabine as compared to placebo plus low-dose cytarabine. The hazard ratio (lintuzumab to placebo) was 0.96, which was not statistically significant at the 0.31 (2-sided) level. The estimated median survival for the lintuzumab arm was 4.7 months, compared to 5.1 months for the placebo arm. These data indicated that lintuzumab was unlikely to be associated with a positive treatment effect.

The treatment arms appeared balanced for demographic and prognostic factors, and the total duration of exposure was comparable between treatment arms. Analysis of OS with respect to demographics and prognostic factors did not identify a subgroup of patients who benefitted from lintuzumab treatment.

No differences between treatment arms were observed for the other efficacy endpoints in this study. The rates of platelet and RBC transfusions; rate of infection or fevers of unknown origin requiring hospitalization or IV antibiotics; change in ANC, platelet count, hemoglobin, and percentage of blasts; change in quality of life; and incidence of clinical benefit were comparable for the lintuzumab and placebo treatment arms.

Lintuzumab was generally well tolerated in combination with low-dose cytarabine. No anti-lintuzumab immune response was detected. With the exception of an increased incidence of infusion reactions in the lintuzumab arm, there was no clinically significant difference in patient safety between treatment arms.