

Supplemental Table 1: Treatment Details of Cladribine-Containing Regimens				
Regimen	Dosing Details			Response Rate on this Study (CR, CRi)
CLIA	Cladribine Idarubicin Cytarabine	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily	Day 1-5 Day 1-3 Day 1-5	40%
CLIA + Gilteritinib	Cladribine Idarubicin Cytarabine Gilteritinib	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily 120 mg daily	Day 1-5 Day 1-3 Day 1-5 Day 1-14	N/A*
CLIA + Midostaurin	Cladribine Idarubicin Cytarabine Midostaurin	5 mg/m ² /dose daily 10 mg/m ² /dose daily 2 mg/m ² /dose daily 25 mg every 12 hours	Day 1-5 Day 1-3 Day 1-5 Day 2-4	0%
CLIA + Quizartinib	Cladribine Idarubicin Cytarabine Quizartinib	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily 20 mg daily	Day 1-5 Day 1-3 Day 1-5 Day 6-19	N/A*
CLIA/Venetoclax	Cladribine Idarubicin Cytarabine Venetoclax	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily 7, 14, or 21 days at 400 mg or 235 mg/m ²	Day 1-5 Day 1-3 Day 1-5 Day 2-	55%
CLIA/Venetoclax + Gilteritinib	Cladribine Idarubicin Cytarabine Venetoclax Gilteritinib	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily 7, 14, or 21 days at 400 mg or 235 mg/m ² 120 mg daily	Day 1-5 Day 1-3 Day 1-5 Day 2- Day 1-14	50%
CLIA/Venetoclax + GO	Cladribine Idarubicin Cytarabine Venetoclax Gemtuzumab ozogamicin	5 mg/m ² /dose daily 10 mg/m ² /dose daily 1.5 mg/m ² /dose daily 7 or 14 days at 400 mg or 235 mg/m ² 4.5 mg or 3 mg/m ² each day	Day 1-5 Day 1-3 Day 1-5 Day 2- Day 1 OR Day 1 and Day 4	67%
CLAD/ARAC + Venetoclax	Cladribine Cytarabine Venetoclax	5 mg/m ² /dose daily 1.5 mg/m ² /dose daily 400 mg max or 235 mg/m ²	Day 1-5 Day 1-4 Day 2-8	33%

CLAD/LDAC + Venetoclax	Cladribine Cytarabine Venetoclax	5 mg/m ² /dose daily 75 mg/m ² /dose twice daily 400 mg or 235 mg/m ²	Day 1-5 Day 1-10 Day 1-21	
CLAD/ARAC	Cladribine Cytarabine	9 mg/m ² daily 500 mg/m ² /day continuous IV infusion	Day 1-5 Day 1-5	50%
CLAD/ARAC + GO	Cladribine Cytarabine Gemtuzumab ozogamicin	5 mg/m ² /dose daily 2 mg/m ² /dose daily 4.5 mg or 3 mg/m ² /dose	Day 1-5 Day 1-5 Day 1	33%
Abbreviations: ARAC, cytarabine; CLAD, cladribine; CLIA, cladribine, idarubicin, cytarabine; GO, gemtuzumab ozogamicin; LDAC, low-dose cytarabine. *These two combinations were used once on this study when patient was already in remission				