

# Characteristics and outcomes of newly diagnosed pediatric acute myeloid leukemia patients who were removed from standard regimens and received alternative therapy

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Andrew Wahba,<sup>1</sup> Samanta Catueno,<sup>2</sup> Katie Na,<sup>1</sup> Samantha Dickson,<sup>2</sup> Alexandra Stevens,<sup>1</sup> Branko Cuglievan<sup>2</sup> and Michele S. Redell<sup>1</sup>

<sup>1</sup>Division of Hematology/Oncology, Department of Pediatrics, Baylor College of Medicine and Texas Children's Cancer and Hematology Center and <sup>2</sup>Department of Pediatrics, The University of Texas MD Anderson Children's Cancer Center, Houston, TX, USA

Correspondence:

A. WAHBA - aawahba@texaschildrens.org

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**Supplementary table 1: Characteristics of the high-risk group who followed the standard sequence (n=33) and the deviated group (n=49).**

	Followed HR (33 patients)		Deviated (49 patients)	
Enrolled or treated according to				
• AAML 0531	2	6%	3	6%
• AAML 1031	21	64%	31	63%
• AAML 1831	8	24%	13	27%
• St Jude AML02	2	6%	1	2%
• St Jude AML16			1	2%
Sex				
• Male	19	58%	27	55%
• Female	14	42%	22	45%
Age (years)				
• Less than 1	6	18%	8	16%
• 1-10	15	45%	17	35%
• More than 10	12	36%	24	49%
CNS involvement at diagnosis				
• CNS 1	14	42%	23	47%
• CNS 2	10	30%	14	29%
• CNS 3	6	18%	10	20%
• Unknown	3	9%	2	4%
Genetic Mutations				
• KMT2A/MLLr	15	45%	13	27%
• Monosomy 7			7	14%
• NUP98r			7	14%
• FLT3-ITD	8	24%	4	8%
• ETV6			2	4%
• CBFA2T3::GLIS2	1	3%		
• DEK::NUP214	1	3%		
• FUS::ERG	1	3%		
• PICALM::MLLT10			2	4%
• t(8:21), RUNX1::RUNX1T1			5	10%
• inv(16), CBFB::MYH11			4	8%

**Supplementary table 2: List of chemotherapy agents received at the first deviated cycle for patients with persistent disease (A) and patients with chemo-toxicity (B).**

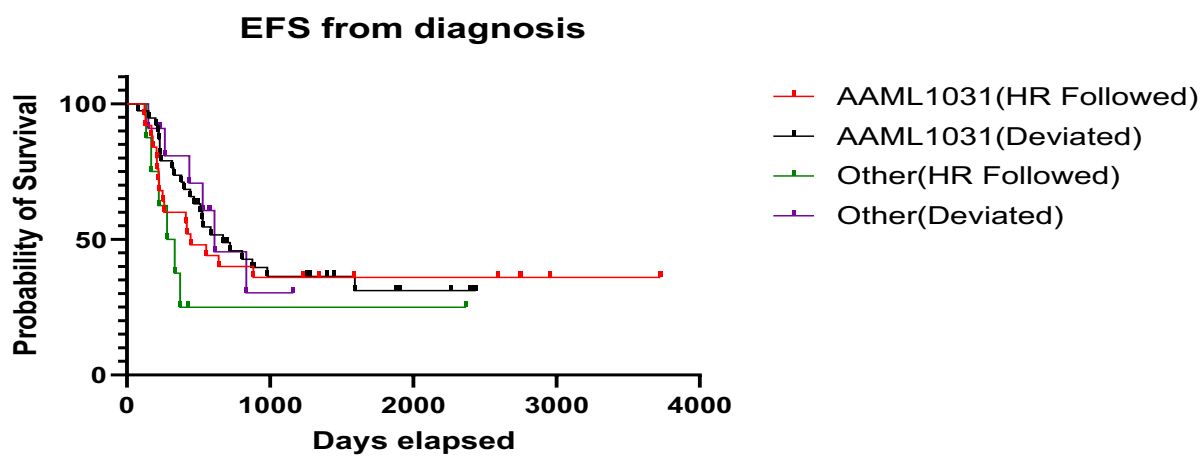
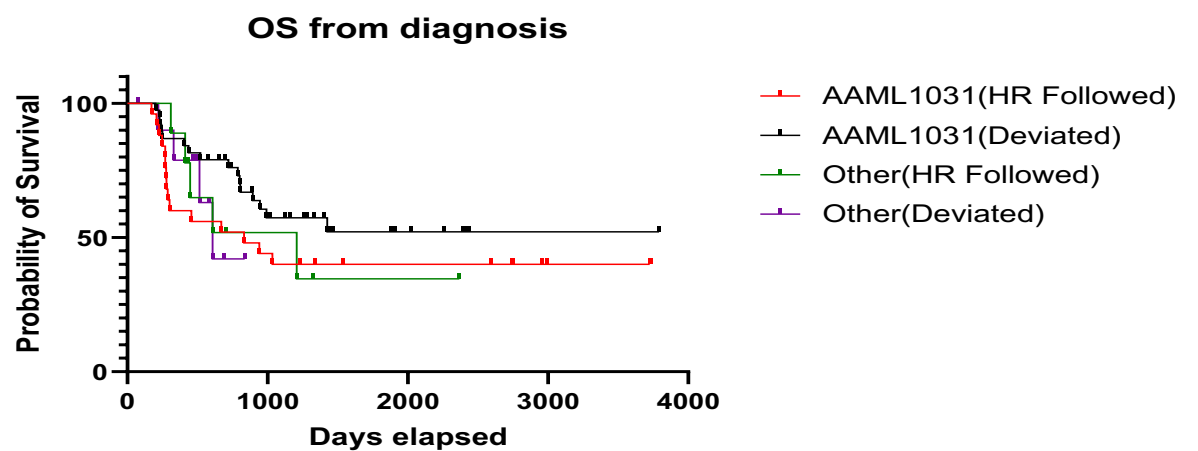
<b>A</b>	Chemotherapy received at the first deviated cycle	Number of patients	Became MRD negative after first deviated cycle
	FLA-containing regimens	21	66.7%
	<ul style="list-style-type: none"> <li>• FLA (+/- G)</li> <li>• FLA + Idarubicin</li> <li>• FLA + Azacitidine</li> <li>• FLA + Decitabine + Vorinostat (T2016-003)</li> <li>• FLA +GO</li> </ul>	8 5 6 1 1	100% 60% 50% 0% 0%
	Idarubicin + Cladribine	4	0%
	High dose AraC + Asparaginase	6	83%
	Azacitidine monotherapy	3	33%
	Azacitidine + Venetoclax	1	100%
	Decitabine + Venetoclax	1	0%
	CPX-351 +/- GO	2	0%
	Menin inhibitor (SNDX-5613)	1	0%
	Others	6	50%

FLA +/- G: fludarabine, cytarabine (AraC) +/- G-CSF (granulocyte-colony stimulating factor); GO: gemtuzumab ozogamicin; CPX-351: liposomal cytarabine and daunorubicin.

<b>B</b>	Chemotherapy received at the first deviated cycle	Number of patients	Became MRD negative after first deviated cycle
	FLA (+/-G)	1	100%
	Cytarabine + Etoposide	2	100%
	High dose AraC + Asparaginase	1	100%

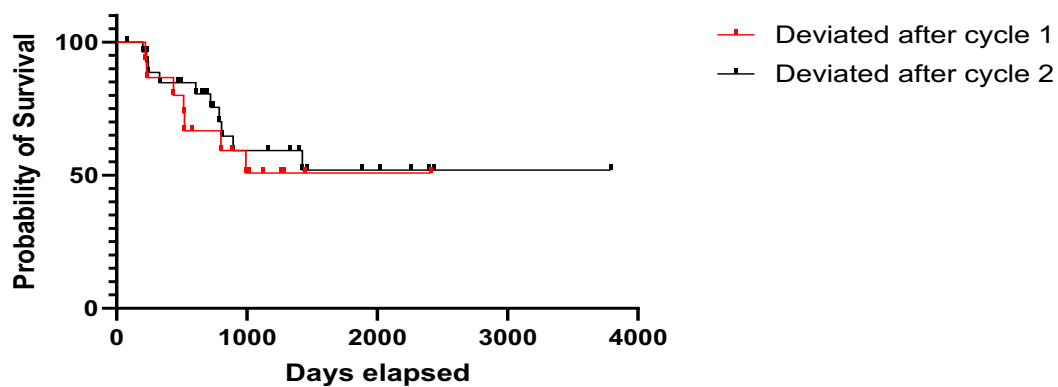
FLA +/- G: fludarabine, cytarabine (AraC) +/- G-CSF (granulocyte-colony stimulating factor).

**Supplementary Figure 1: Survival for newly diagnosed AML patients based on the study enrolled on or treated accordingly.**

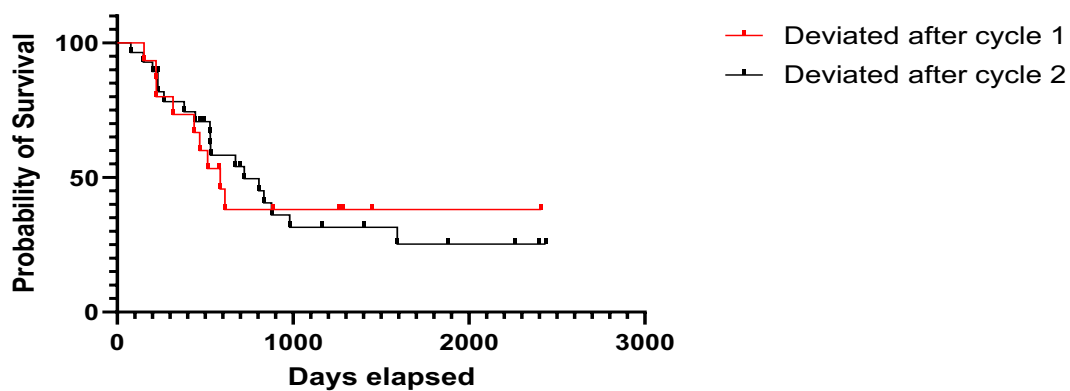


**Supplementary Figure 2: Survival based on time of deviation. (A) Overall survival (OS) and (B) event free survival (EFS) from diagnosis for the deviated group; (C) overall survival (OS) from diagnosis for patients treated per AAML1031 regimen.**

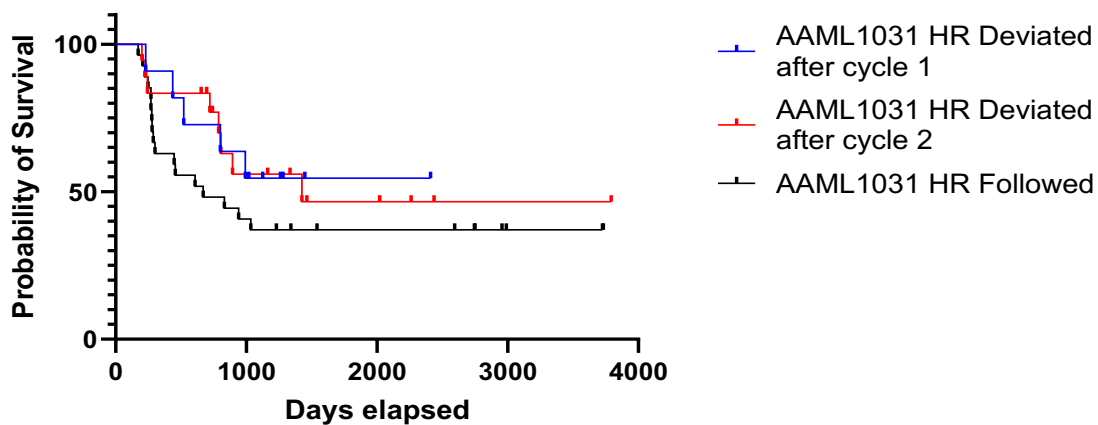
**A OS from diagnosis**



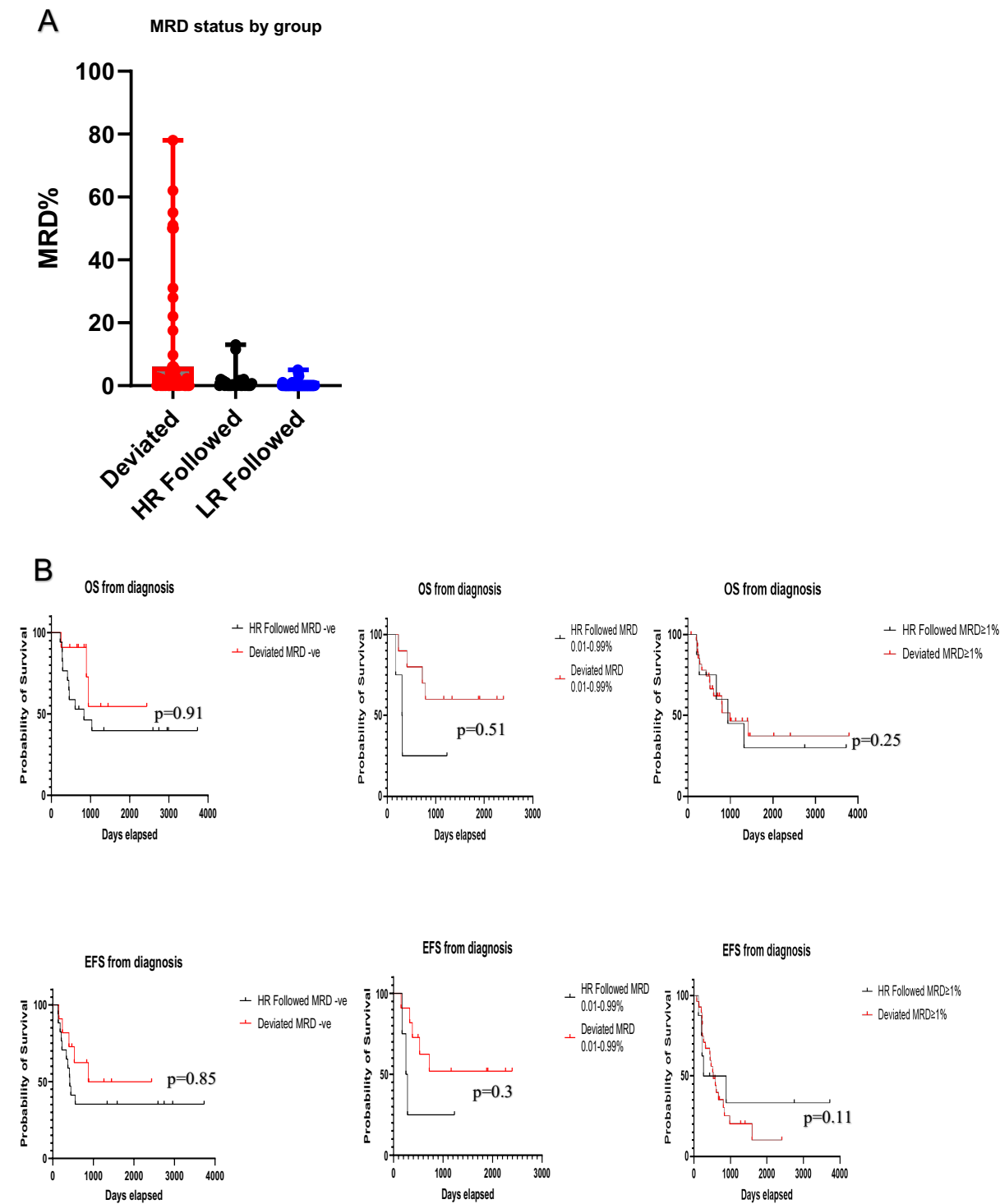
**B EFS from diagnosis**



**C OS from diagnosis**

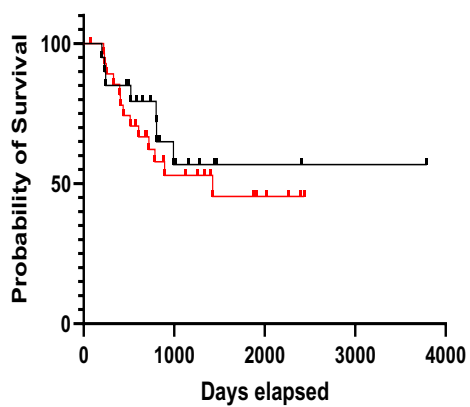


**Supplementary Figure 3: (A) A box and whisker plot to show the distribution of MRD status between groups at end of induction I. (B) Survival of the high risk (HR) Followed and Deviated groups based on MRD status at end of induction I. (C) Survival of the deviated group based on MRD status at time of deviation.**



C

OS from diagnosis



EFS from diagnosis

