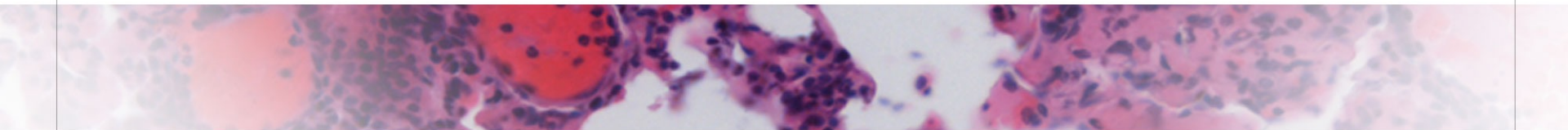




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# Anti-Leukemic Activity of STRO-002, a Novel Folate Receptor- $\alpha$ (FR- $\alpha$ )-Targeting ADC in Relapsed/Refractory *CBFA2T3::GLIS2* AML

**Soheil Meshinchi, M.D., Ph.D.<sup>1</sup>**, Lane Miller, MD, MSc<sup>2\*</sup>, Stephanie Massaro, MD, MPH<sup>3\*</sup>, Robin Williams, MD, MS<sup>4</sup>, Elizabeth Krieger, MD<sup>5</sup>, Melinda Pauly, MD<sup>6,7</sup>, Catherine Nelson, DO<sup>8</sup>, Deepa Bhojwani, MD<sup>9</sup>, Rebecca Johnson, MD<sup>10\*</sup>, Terzah M. Horton, MD, PhD<sup>11</sup>, Hamayun Inwan, MD, MSc<sup>12</sup>, Wen-I Chang, MD<sup>13\*</sup>, Jennifer Welch, MD<sup>13\*</sup>, Philip Neff, MD<sup>14\*</sup>, Matthew Kutny, MD<sup>15\*</sup>, Raul C. Ribeiro, MD<sup>16</sup>, Felipe Bautista, MD<sup>17\*</sup>, Terri Guinipero, MD<sup>18\*</sup>, Amy Johnson MD<sup>19</sup>, Karen Lewing, MD<sup>19</sup>, Alan Gamis MD<sup>19</sup>, Laura Pardo, MS<sup>20</sup>, Michael R. Loken PhD<sup>20</sup>, Lisa Brodersen, PhD<sup>20</sup>, Lin Lu, PhD<sup>21</sup>, Kate Murray<sup>21\*</sup>, Alex Butte<sup>21\*</sup> and Arturo Molina, MD, MS<sup>21</sup>

<sup>1</sup>Fred Hutchinson Cancer Center, Seattle, WA, <sup>2</sup>Children's Minnesota, Minneapolis, MN, <sup>3</sup>Yale University School of Medicine, New Haven, CT, <sup>4</sup>University of Minnesota Masonic Children's Hospital, Minneapolis, MN, <sup>5</sup>Virginia Commonwealth University Health System, Richmond, VA, <sup>6</sup>Emory University School of Medicine, Atlanta, GA, <sup>7</sup>Emory University, Atlanta, GA, <sup>8</sup>Sanford Children's Hospital, Sioux Falls, SD, <sup>9</sup>Children's Hospital of Los Angeles, University of Southern California, Los Angeles, CA, <sup>10</sup>Mary Bridge Children's Hospital, Tacoma, <sup>11</sup>Baylor College of Medicine, Houston, TX, <sup>12</sup>University of South Alabama, Mobile, AL, <sup>13</sup>Hasbro Children's Hospital, Providence, RI, <sup>14</sup>Dell Children's Hospital, Austin, TX, <sup>15</sup>University of Alabama Birmingham, Birmingham, AL, <sup>16</sup>St. Jude Children's Research Hospital, Memphis, TN, <sup>17</sup>Novant Health Hemby Children's Hospital, Charlotte, NC, <sup>18</sup>Nationwide Children's Hospital, Columbus, OH, <sup>19</sup>Children's Mercy Kansas City, MO, <sup>20</sup>Hematologics, Inc. Seattle, WA; <sup>21</sup>Sutro Biopharma, South San Francisco, CA



Fred Hutch  
Cancer Center

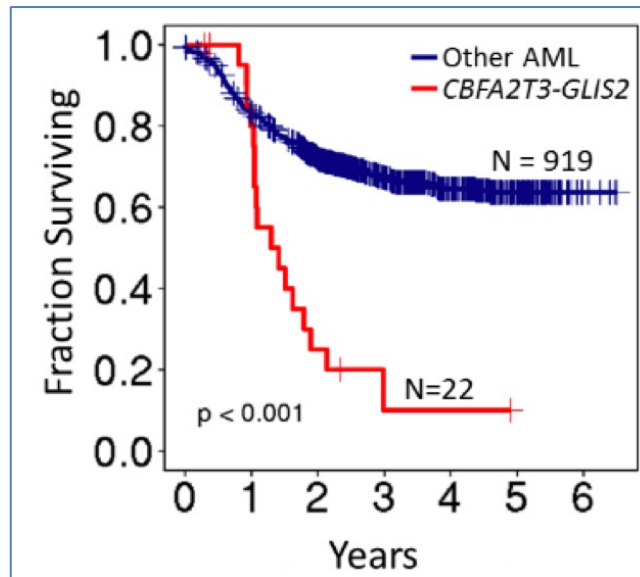
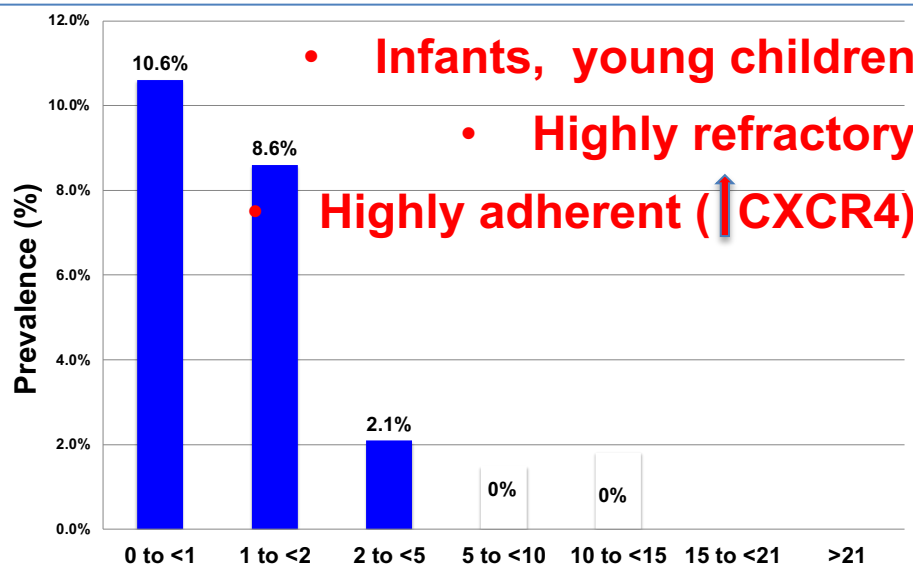
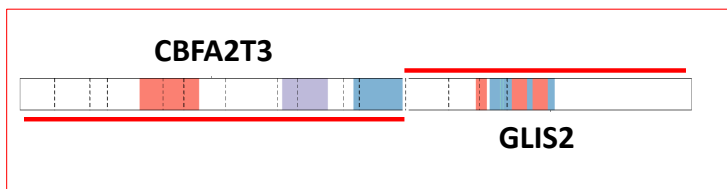
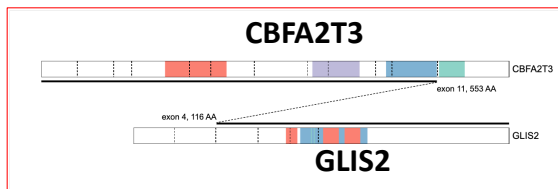
# Disclosures

- Alex Butte and Kate Murray are employees of Sutro Biopharma
- Arturo Molina was an employee of Sutro Biopharma.
- Michael R. Loken, Laura Pardo and Lisa Brodersen are employees of Hematologics, Inc.
- Other authors – No disclosures



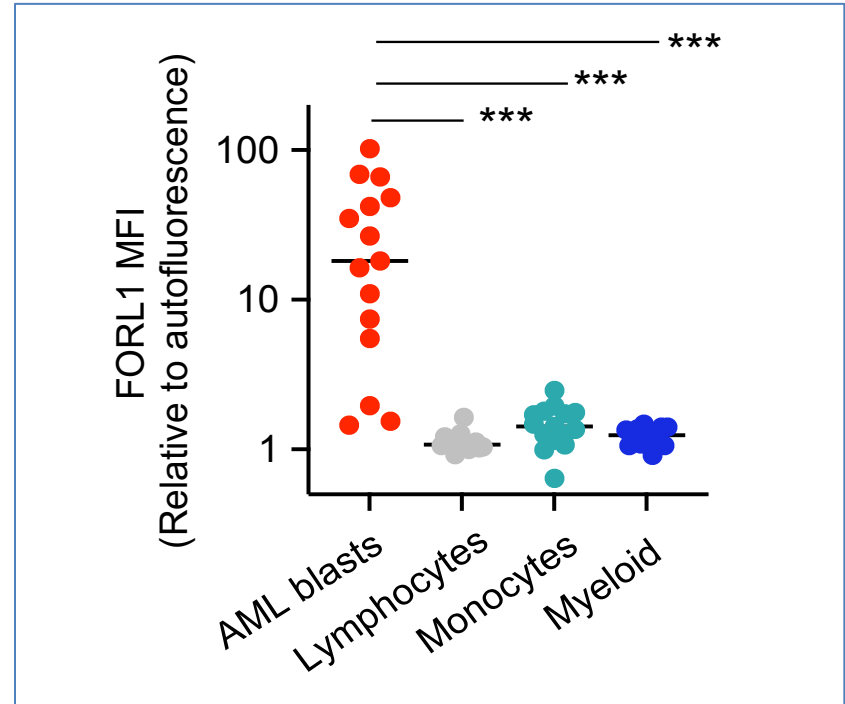
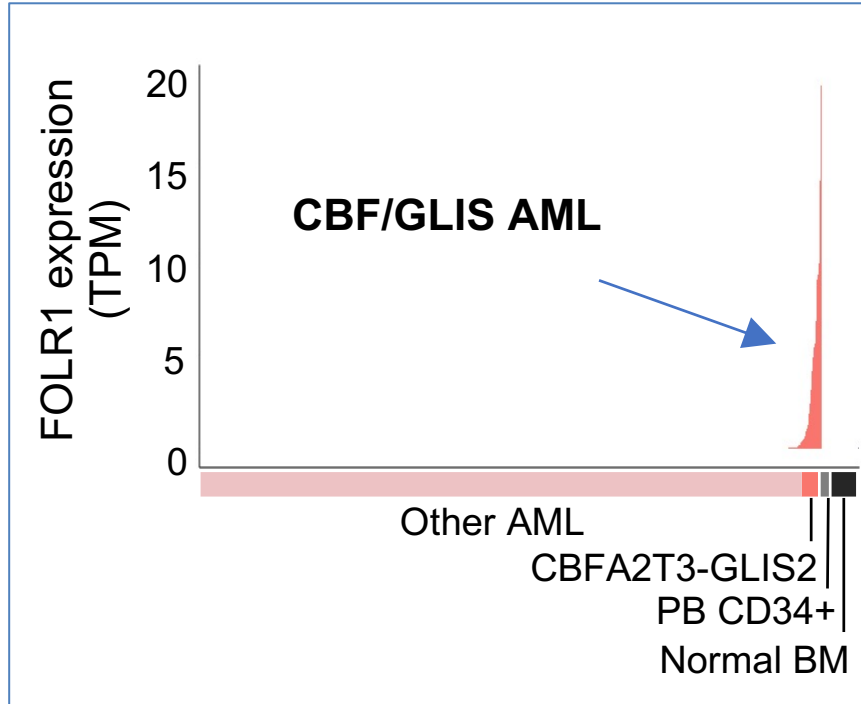
# CBFA2T3-GLIS2 (CBF/GLIS) AML

Most refractory Childhood AML



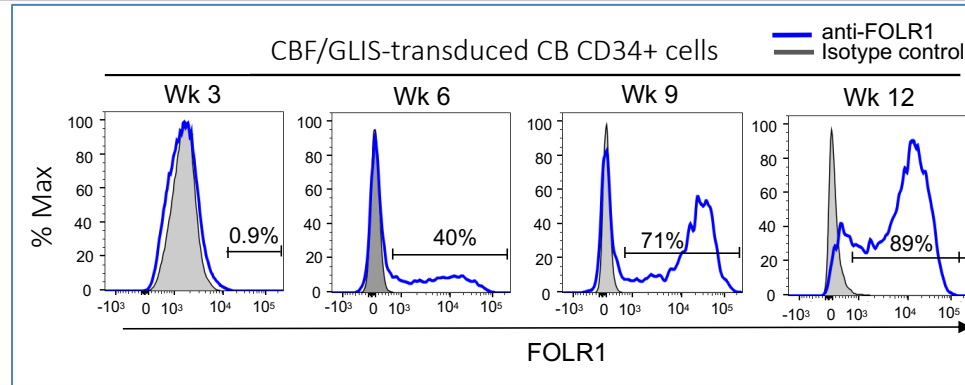
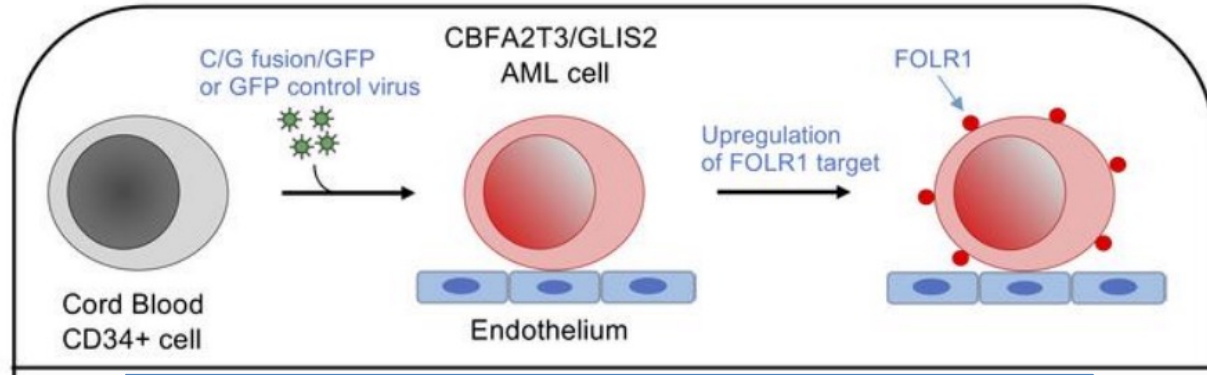
# FOLR1 uniquely expressed in CBF/GLIS AML

## No expression in normal hematopoiesis

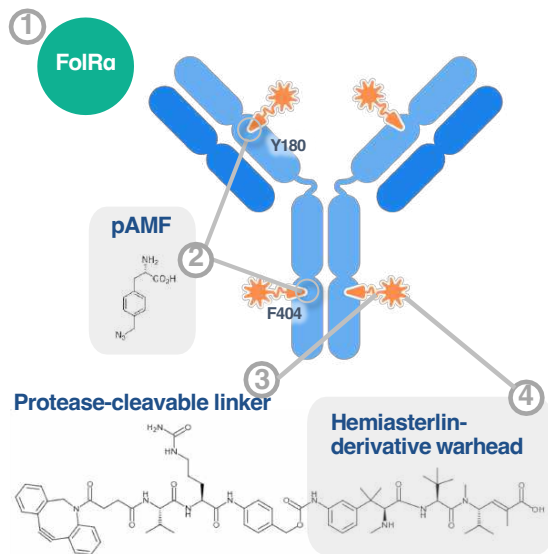


# FOLR1 expression is induced by CBF/GLIS fusion

## Causal Link between fusion and FOLR1 expression



# STRO-002 (Luveltamab Tazevibulin) is a FOLR1-directed ADC with promising clinical activity against FOLR1-positive ovarian cancer



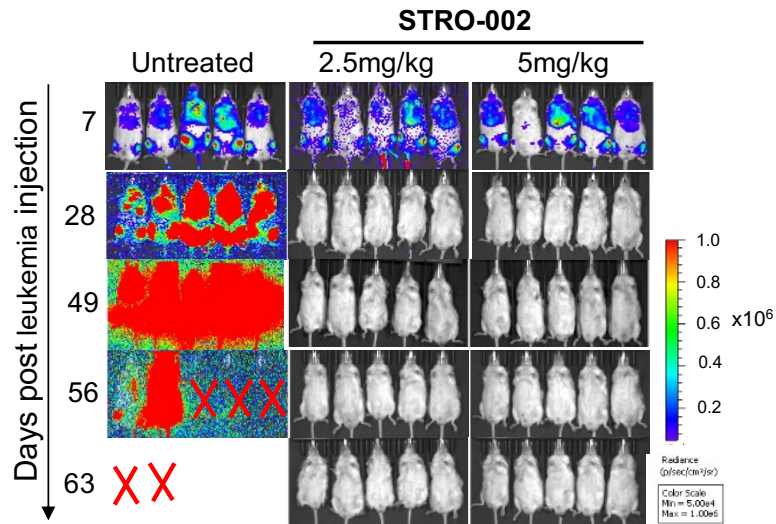
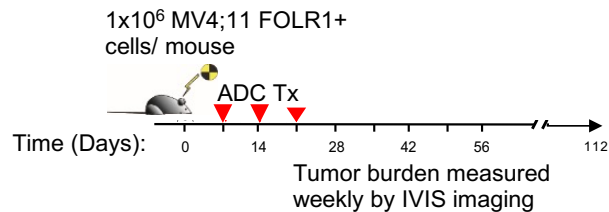
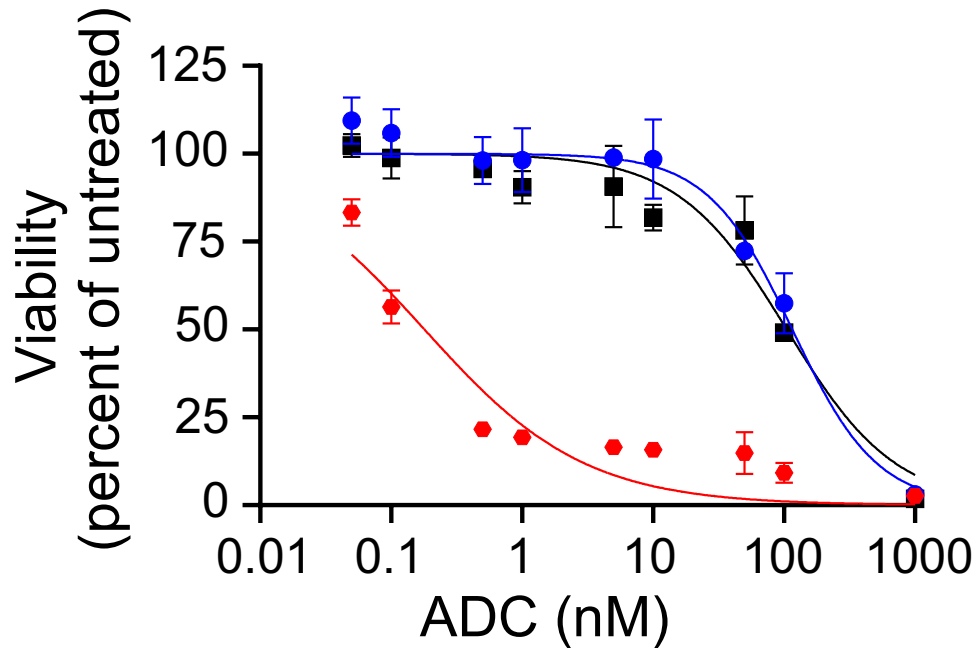
STRO-002 is a homogeneous antibody drug conjugate (ADC) with a drug-antibody ratio (DAR) of 4, targeting folate-receptor alpha (FolRa)

- 1 **FolRa** is overexpressed in certain cancers including **ovarian cancer** and **endometrial cancer**
- 2 Precisely positioned **non-natural amino acids**, p-azidomethyl-L-phenylalanine (pAMF), at positions Y180 and F404 on the heavy chain
- 3 **Stable protease-cleavable linkers**, with rapid clearance of toxic catabolite after release and cell killing
- 4 Warhead is hemiasterlin-derivative<sup>1</sup> with potentially **dual mechanism** against the tumor – **tubulin-inhibitor cytotoxin**, **less sensitive to P-gp transport** and induces **immunogenic response upon cell death**<sup>2</sup>

(1) Sutro-proprietary tubulin-targeting 3-aminophenol hemiasterlin warhead, SC209.

(2) Based on STRO-002 pre-clinical models showing immune stimulation at site of tumor upon cell death.

# STRO-002; Potent FOLR1-directed Cytotoxicity



# STRO-002

## CLINICAL EXPERIENCE IN CBF/GLIS AML

**17 patients with CBF/GLIS+ AML treated with STRO-002 through SUTRO Compassionate Use Program**





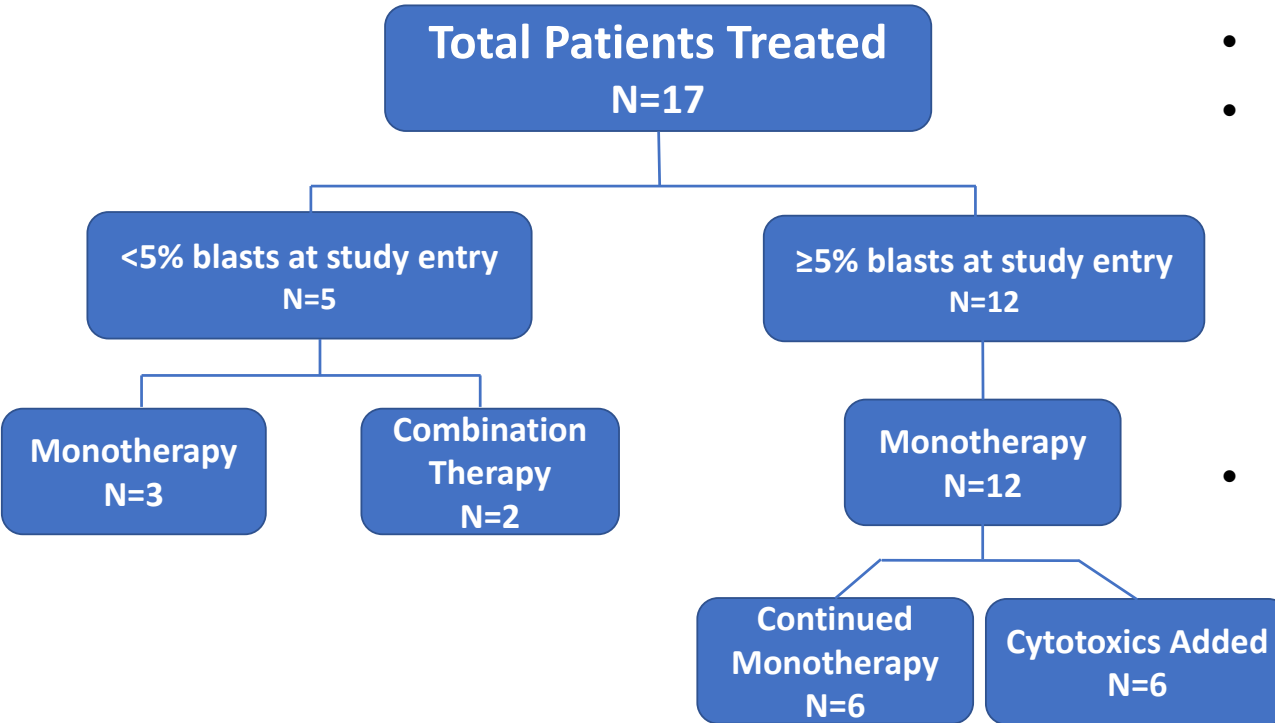
# Patient Demographics

	Number	%
<b>Age at treatment</b>		
<1	3	17%
1-2	10	60%
>2	4	23%
<b>Median: 2</b>		
<b>Gender</b>		
Male	7	41%
Female	10	59%
<b>Race</b>		
White	9	53%
Black / African American	5	29%
Asian	3	18%
<b>Ethnicity</b>		
Non-Hispanic	14	82%
Hispanic	2	12%
Not Reported	1	6%

	Number	%
<b>Months from diagnosis to treatment</b>		
<6 months	6	35%
6-12 months	5	29%
>12-24 months	5	29%
>24 months	1	6%
<b>Number of prior therapies</b>		
1-2	12	70%
3-4	3	18%
≥5	2	12%
<b>Median: 2</b>		
<b>Disease status prior to STRO-002</b>		
Prior transplant	8	47%
Primary refractory/relapsed AML	9	53%



# Treatment Pathway



- Initial Monotherapy in 15
- Combination with
  - Methotrexate
  - Fludarabine & Cytarabine (+/- G-CSF)
  - Venetoclax +/- Azacitidine
  - Decitabine
- Consolidation with
  - DLI (donor lymphocyte infusions)
  - Stem cell transplant



# Adverse Events

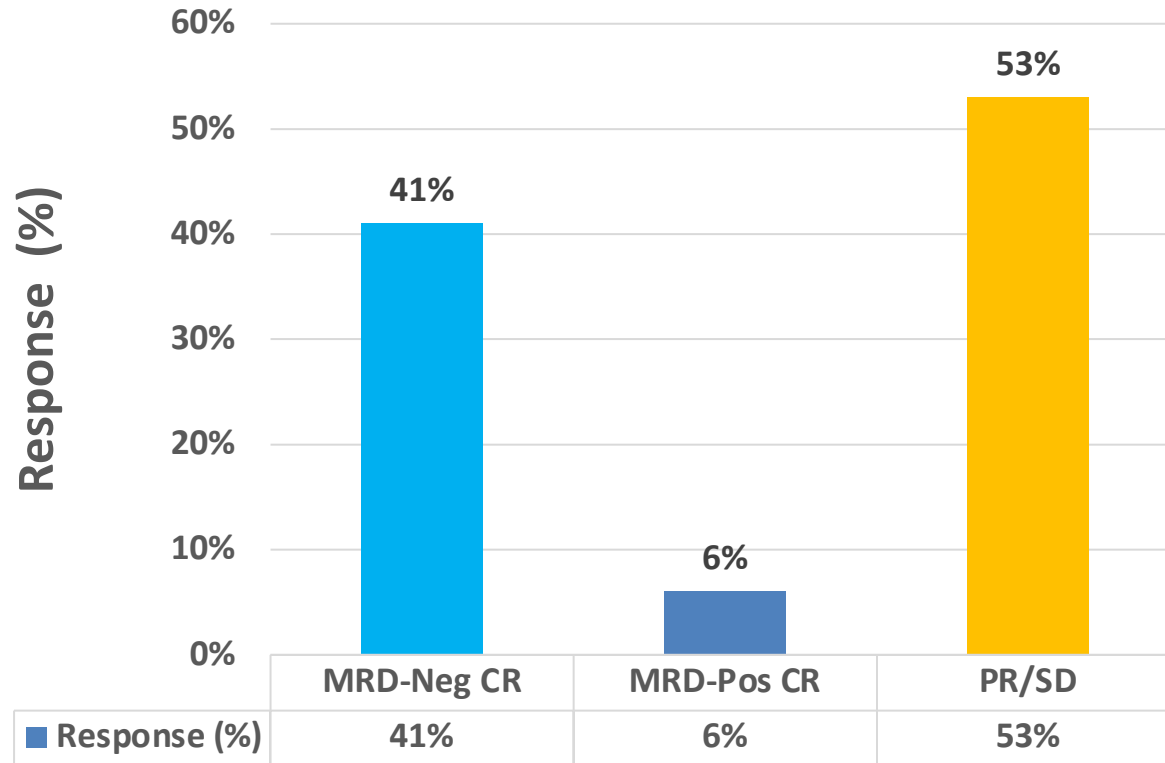
Most common AEs, occurring in > 1 patient and considered possibly, probably or definitely related to STRO-002

# of patients evaluated = 16	Grade 1	Grade 2	Grade 3	Grade 4	Total (%)
Neutrophil count decreased	0	0	2	4	6 (40)
Thyroid stimulating hormone increased	3	1	0	0	4 (26.7)
Lymphocyte count decreased	0	0	2	1	3 (20)
Platelet count decreased	0	0	2	1	3 (20)
Anemia	0	0	2	0	2 (13.3)
Febrile Neutropenia	0	0	2	0	2 (13.3)
Vomiting	0	0	2	0	2 (13.3)
White blood cell decreased	1	0	1	0	2 (13.3)
Fever	1	1	0	0	2 (13.3)
Aspartate aminotransferase increased	1	0	1	0	2 (13.3)
Hypokalemia	1	0	0	1	2 (13.3)

- **Well tolerated**
  - Monotherapy
  - Combination
- **Outpatient monotherapy**
- **Maintenance monotherapy with little to no neutropenia**



# Best Overall Response to STRO-002

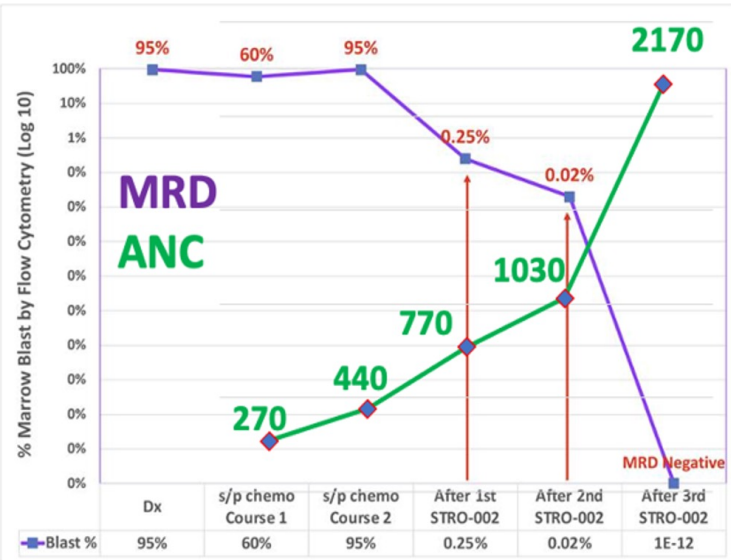


## Response to STRO-002

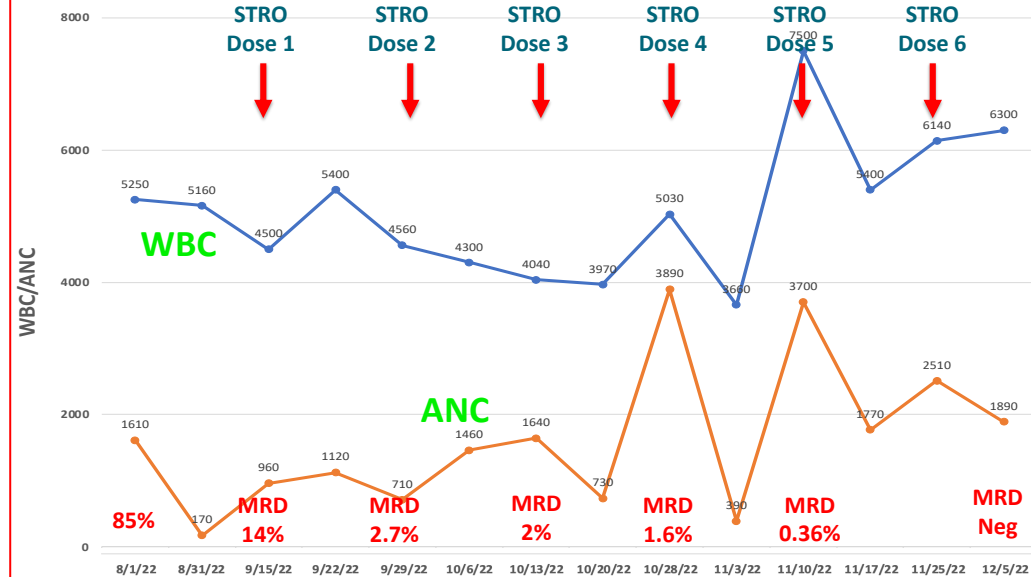


# Deep Response with No Hematopoietic Toxicity

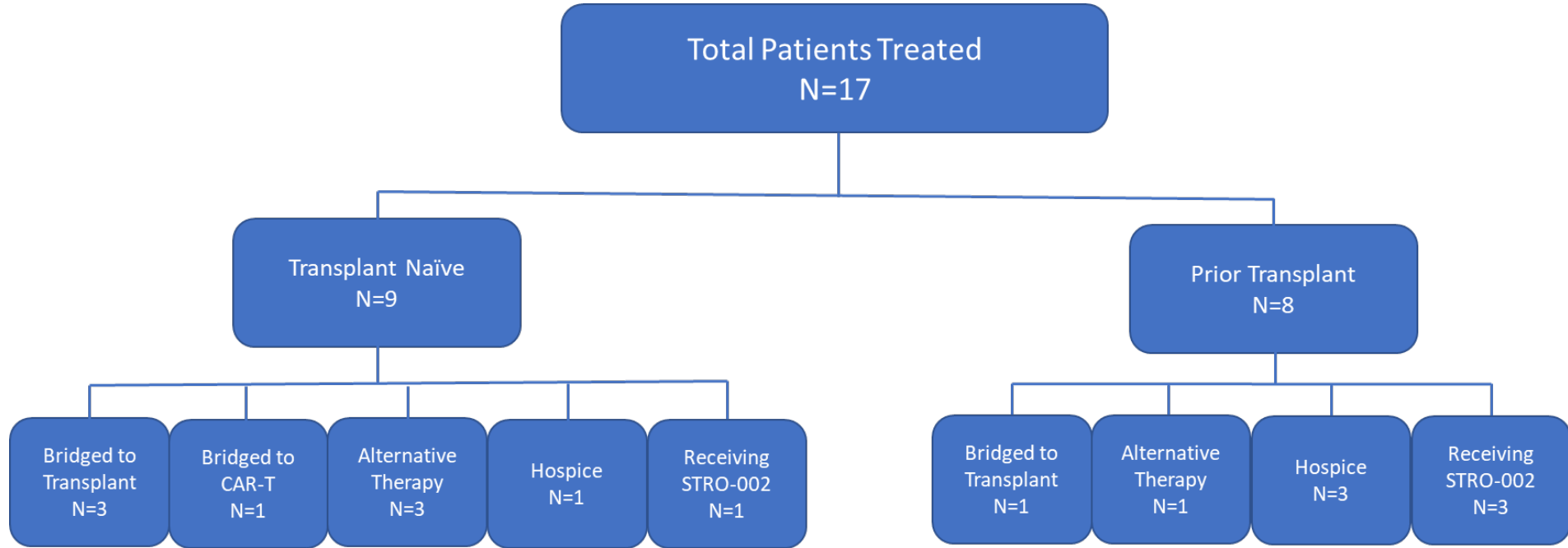
## Patient ST-009



## Patient ST-019



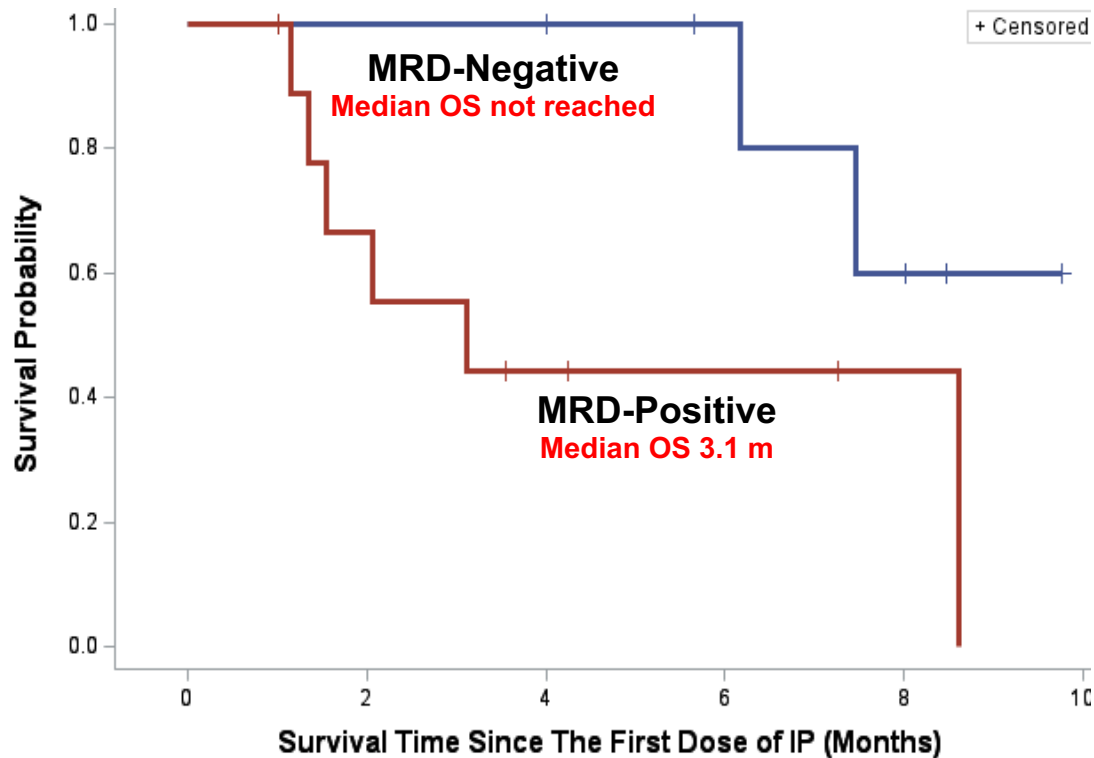
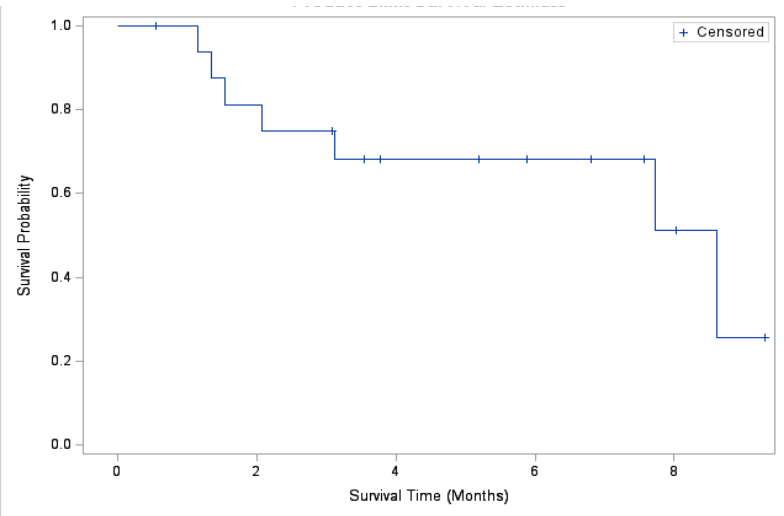
# Patient Disposition



# Survival Post STRO-002 Treatment

## By Response status

### All Patients



# Conclusions

- **FOLR1 is expressed in CBF/GLIS AML**
  - Causal association
  - No expression in normal hematopoiesis
- **STRO-002 exhibits anti-leukemia activity in relapsed/refractory CBFA2T3-GLIS2 AML**
- **Well tolerated as monotherapy and in combination with cytotoxic therapy**
- **Responses were seen in patients with and without prior stem cell transplant**
- **Response (CR) associated with improved outcome**





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## ***Collaborators:***

*Lane Miller, MD, MSc*  
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*Felipe Bautista, MD*  
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## ***Sutro Team***

*Lin Lu, PhD*  
*Kate Murray*  
*Alex Butte*  
*Arturo Molina MD, MS*

