CG-203 Attachment A: FISH Panels

Contingent on a positive immunophenotype result performed concurrently at TCH, at a referring institution, or reference laboratory, selected FISH probe panels (orderable in Epic as FISH test: AML/ALL FISH Panel) will be performed according to the following diagnoses:

1. **Precursor B-cell acute lymphoblastic leukemia or lymphoma**
    - Centromere for chromosomes 4, 10, 17
    - ETV6-RUNX1 fusion - t(12;21)
    - BCR-ABL1 fusion - t(9;22)
    - KMT2A (MLL) gene rearrangement - 11q23
    - CDKN2A (p16) gene deletion - 9p21 band
    - IGH gene rearrangement - 14q32
    - TCF3 (E2A) gene rearrangement - t(1;19)
    - TCR A/D gene rearrangement - 14q11
    - CRLF2 gene rearrangement - Xp22.33/Yp11.32

      If flow results are reported positive for CRLF2, then add to this panel instead of CRLF2 and IGH BAP. Also, if CRLF2 BAP probe is positive for rearrangement (not deletion or copy number), regardless of flow results, add:
    - CRLF2-IGH fusion - t(X;14)

    For high risk patients (criteria for Pre-B ALL high risk: ≥10 years of age or ≤ 10 years of age with an initial peripheral blood WBC count ≥50,000), then add the following probes:
        - ABL2 gene rearrangement - 1q25.2
        - PDGFRB gene rearrangement - 5q32
        - ABL1 gene rearrangement - 9q34.11-q34.13

2. **T-cell acute lymphoblastic leukemia or lymphoma**
    - CDKN2A (p16) gene deletion - 9p21 band
    - BCR-ABL1 fusion - t(9;22)
    - KMT2A (MLL) gene rearrangement - 11q23
    - TCR A/D gene rearrangement - 14q11
    - TCRB gene rearrangement - 7q34
    - IGH gene rearrangement - 14q32

3. **Acute myeloid leukemia**
    - KMT2A (MLL) gene rearrangement - 11q23
    - CBFB-MYH11 fusion - inv(16)/t(16;16)
    - NUP98 gene rearrangement - 11p15.4

    If above probes are Negative, then add:
        - RUNX1T1-RUNX1 (ETO-AML) fusion - t(8;21)

- ETV6 BAP (gene rearrangement) - 12p13
- Monosomy 5/5q31 deletion
- Monosomy 7/7q31 deletion
- DEK-NUP214 fusion - t(6;9)
- RPN1-MECOM fusion - inv(3)/t(3;3)
- MYST3/CREBBP fusion - t(8;16)
- GLIS2 gene rearrangement - 16p13.3

4. Myelodysplastic syndrome (MDS) panel

- Monosomy 5/5q31 deletion
- Monosomy 7/7q31 deletion
- LSI 20 - 20q12 deletion
- Centromere for chromosome 8
- TP53/CEP 17 – 17p13 deletion

5. Burkitt Lymphoma

- MYC-IGH fusion - t(8;14)
  If above probe shows MYC rearrangement, but no fusion then add:
- MYC BAP (gene rearrangement) - 8q24