ALPS Diagnostic Testing Algorithm

**Patient presents with clinical suspicions of ALPS:**
1) Chronic, non-malignant, lymphadenopathy and/or splenomegaly
2) ALPS Panel: double-negative T cells (DN TC) increased
3) Biomarker testing abnormal (IL-10, sFasL, IL-18, vitamin B12)

**Abnormal: Genetic Testing Algorithm Options**

- **Abnormal:** ALPS panel by NGS (includes CASP8, CASP10, FADD, FAS, FASLG, NRAS, KRAS)
  - **Normal**
    - Somatic FAS mutation in sorted DN TC
      - **Normal**
        - Apoptosis (Fas-mediated) assay
          - **Abnormal:** ALPS of unknown genetic diagnosis
          - **Normal:** ALPS unlikely. In the absence of immunosuppressive medications, consider alternate diagnosis.
          - **Abnormal:** Genetic Testing Algorithm Options

- **Abnormal:** Test FAS mutation
  - **Somatic FAS mutation in sorted DN TC**
    - **CASP10 mutation**
      - **FASLG mutation**
        - Apoptosis (Fas-mediated) assay
          - **Abnormal:** ALPS of unknown genetic diagnosis
          - **Normal:** Stop - consider alternate diagnosis (caution if patient is on immunosuppression)

**DIL Requisition:**
ALPS Panel (by flow cytometry) and Biomarker Testing: IL-18, sFasL, and IL-10 (IL-10 as a part of the Plasma Cytokine panel).
Apoptosis (Fas-mediated): Must be <24 hours old and received on Thursdays by 11am.

**Molecular Genetics Requisition:**
Somatic FAS in DN TC MUST be scheduled. Please call 513-636-2731 to schedule this test.