Evaluation of Potential Anaplastic Large Cell Lymphoma Cases

Morphology suggests ALCL, order PATHC / Pathology Consultation

Stains recommended: H&E, CD2, CD3, CD4, CD5, CD7, CD8, CD20, CD30, ALK-1, Granzyme B, p63, TCR-BF1, TCR-gamma delta, TIA-1

CD30 positive and ALK-1 positive

Diagnostic for ALCL, ALK positive

Skin Involvement?

YES  NO

Consider primary cutaneous ALCL  Systemic ALCL, ALK positive

Skin Involvement?

YES  NO

p63 >30% positive  p63 <30% positive

Order:
- IRF4F / Cutaneous Anaplastic Large Cell Lymphoma, 6p25.3 (DUSP22 or IRF4) Rearrangement, FISH, Tissue
- TP63F / Peripheral T-Cell Lymphoma (PTCL), TP63 (3q28) Rearrangement, FISH, Tissue

TP63 FISH positive

NO  YES

DUSP-22 positive or negative

Skin Involvement?

NO  YES

- Systemic ALCL, ALK negative  High risk for adverse outcome
- Consider primary cutaneous ALCL

TP63 FISH negative

NO  YES

DUSP-22 negative

Skin Involvement?

NO  YES

- Systemic ALCL, ALK negative  Intermediate prognosis
- Consider primary cutaneous ALCL

TP63 FISH negative

NO  YES

DUSP-22 negative

Skin Involvement?

NO  YES

- Systemic ALCL, ALK negative  Favorable prognosis
- Consider primary cutaneous ALCL

DUSP-22 positive

NO  YES

Skin Involvement?

- Systemic ALCL, ALK negative  Intermediate prognosis
- Consider primary cutaneous ALCL

DUSP-22 negative

NO  YES

Skin Involvement?

- Systemic ALCL, ALK negative  Intermediate prognosis
- Consider primary cutaneous ALCL

Systemic ALCL, ALK negative

Intermediate prognosis

Systemic ALCL, ALK negative

Favorable prognosis

Systemic ALCL, ALK negative

Intermediate prognosis

Consider other PTCL types

Skin Involvement?

YES  NO

Review p63 IHC

Systemic ALCL, ALK negative

Intermediate prognosis

Systemic ALCL, ALK negative

High risk for adverse outcome

Skin Involvement?

YES  NO

Consider primary cutaneous ALCL

ALCL=Anaplastic large cell lymphoma
PTCL=Peripheral T-cell lymphoma
H&E=Hematoxylin and eosin
IHC=Immunohistochemistry