Descriptive language in dermpath reports: don't let it fool you

Timothy McCalmont, MD
University of California, San Francisco
How to interpret a descriptive pathology report (in the context of cutaneous lymphoma)

Timothy McCallmont, MD
University of California, San Francisco
The 9 most terrifying words in the English language are said to be:
The 9 most terrifying words in the English language are said to be:

- I’m from the government and I’m here to help
The 9 most terrifying words in the English language are said to be:

- I’m from the government and I’m here to help (Reagan, 1986)
The 9 most terrifying words in the English language are said to be:

- I’m from the government and I’m here to help (Reagan, 1986)
But seriously, “terrifying” or confusing path-speak that comes up in the clinic includes:
“Terrifying” or confusing path-speak in the clinic:

- Uncertain malignant potential
“Terrifying” or confusing path-speak in the clinic:

• Uncertain malignant potential
• Severely atypical
“Terrifying” or confusing path-speak in the clinic:

- Uncertain malignant potential
- Severely atypical
- Cannot exclude
“Terrifying” or confusing path-speak in the clinic:

- Uncertain malignant potential
- Severely atypical
- Cannot exclude
- Atypical lymphoid infiltrate
Diagnoses may be exact or inexact
Diagnoses may be exact or inexact (descriptive)
Exact diagnoses:

- Infiltrative basal cell carcinoma
- Melanoma of a given thickness
- Epidermal nevus
- Lichen planus
- Mycosis fungoides, patch stage
- Marginal zone lymphoma
Exact diagnoses:

Refer precisely to an entity and *can be precisely acted upon*, presuming the diagnosis is correct.
Descriptive diagnoses:

- Atypical melanocytic proliferation
- Atypical basaloid proliferation
- Lichenoid dermatitis
- Severe dysplasia
- Atypical lymphoid infiltrate
Descriptive diagnoses:

Refer to a general category of disease or a differential, often with stipulations, and cannot or should not be precisely acted upon until an exact diagnosis (or at least a more exact provisional diagnosis) has been negotiated.
What exactly does *atypical lymphoid infiltrate* mean?

- An equivocal or descriptive term employed when it is not possible for a pathologist to differentiate between the benign or malignant nature of a given infiltrate (medscape.com)
What exactly does *atypical lymphoid infiltrate* mean?

- An equivocal or descriptive term employed when it is not possible for a *pathologist* to differentiate between the benign or malignant nature of a given infiltrate (*medscape.com*)
Who’s fault is it?
Who’s fault is it?

- The clinician?
Who’s fault is it?

• The clinician?
• The pathologist/dermatopathologist?
Who’s fault is it?

- The clinician?
- The pathologist/dermatopathologist?
- Mother Nature?
Who’s fault is it?

- *The clinician*
- The pathologist/dermatopathologist
- Mother Nature
Who’s fault is it?

- The clinician
  - Have I provided enough info?
- The pathologist/dermatopathologist
- Mother Nature
Who’s fault is it?

• **The clinician**
  • Have I provided enough info?
  • Do I need more biopsies?

• The pathologist/dermatopathologist

• Mother Nature
Who’s fault is it?

- **The clinician**
  - Have I provided enough info?
  - Do I need more biopsies?
  - Do I need a consultant?
- The pathologist/dermatopathologist
- Mother Nature
Who’s fault is it?

• The clinician
• The pathologist/dermatopathologist
• Mother Nature
Who’s fault is it?

• The clinician
• The pathologist/dermatopathologist
  • Do I have sufficient familiarity?
• Mother Nature
Who’s fault is it?

- The clinician
- **The pathologist/dermatopathologist**
  - *Do I have sufficient familiarity?*
  - *Are all needed stains available?*
- Mother Nature
Who’s fault is it?

- The clinician
- The pathologist/dermatopathologist
  - Do I have sufficient familiarity?
  - Are all needed stains available?
  - Do I need genotyping?
- Mother Nature
Who’s fault is it?

- The clinician
- *The pathologist/dermatopathologist*
  - *Do I have sufficient familiarity?*
  - *Are all needed stains available?*
  - *Do I need genotyping?*
  - *Do I need a consultant?*
- Mother Nature
Who’s fault is it?

- The clinician
- The pathologist/dermatopathologist
- *Mother Nature*
Who’s fault is it?

• The clinician
• The pathologist/dermatopathologist
• *Mother Nature*

• *Is this a completely new entity?*
Who’s fault is it?

• The clinician
• The pathologist/dermatopathologist
• **Mother Nature**
  • *Is this a completely new entity?*
  • *Is this a trick with mixed features of more than one entity?*
Algorithmically, what are the scenarios I should watch for?
Algorithmically, what are the scenarios I should watch for?

1. The subcutaneous infiltrate
Algorithmically, what are the scenarios I should watch for?

1. The subcutaneous infiltrate
2. The solitary nodular infiltrate
Algorithmically, what are the scenarios I should watch for?

1. The subcutaneous infiltrate
2. The solitary nodular infiltrate
3. The partly plasmacytic infiltrate
Algorithmically, what are the scenarios I should watch for?

1. The subcutaneous infiltrate
2. The solitary nodular infiltrate
3. The partly plasmacytic infiltrate
4. The superficial lymphoid infiltrate
Algorithmically, what are the scenarios I should watch for?

1. The subcutaneous infiltrate
2. The solitary nodular infiltrate
3. The partly plasmacytic infiltrate
4. The superficial lymphoid infiltrate
5. The CD30+ infiltrate
6. The small lymphocytic infiltrate
7. Et cetera
1. The subcutaneous infiltrate
1. The subcutaneous infiltrate

- Panniculitis, especially lupus erthematosus profundus
1. The subcutaneous infiltrate

- Panniculitis, especially lupus erthematosus profundus
- Panniculitic T-cell lymphoma (αβ)
1. The subcutaneous infiltrate

- Panniculitis, especially lupus erthematosus profundus
- Panniculitic T-cell lymphoma ($\alpha\beta$)
- Panniculitic T-cell lymphoma ($\gamma\delta$)
1. The subcutaneous infiltrate

- Panniculitis, especially lupus erthematosus profundus
- Panniculitic T-cell lymphoma (αβ)
- Panniculitic T-cell lymphoma (γδ)
- Subcutaneous lymphoma NOS
Subcutaneous Panniculitis-Like T-Cell Lymphoma With Overlapping Clinicopathologic Features of Lupus Erythematosus: Coexistence of 2 Entities?

Laura B. Pincus, MD,* Philip E. LeBoit, MD,*† Timothy H. McCalmont, MD,*† Roberto Ricci, MD,† Carlo Buzio, MD.§ Lindy P. Fox, MD,* Fergus Oliver, MD,¶ and Lorenzo Cerroni, MD§
SPTCL (αβ), courtesy Panitta Sitthinamsuwan
SPTCL ($\alpha\beta$)

Ki67

LE panniculitis

Ki67
SPTCL (αβ) LE panniculitis

Ki67

CD8
SPTCL (αβ)

Ki67

CD8

CD123

LE panniculitis

Ki67

CD8

CD123
1. The subcutaneous infiltrate: resolution
1. The subcutaneous infiltrate: resolution

- Clinicopathologic correlation
1. The subcutaneous infiltrate: resolution

- Clinicopathologic correlation
- GM3 staining, to split out γδ lymphoma
1. The subcutaneous infiltrate: resolution

- Clinicopathologic correlation
- GM3 staining, to split out γδ lymphoma
- CD8 and Ki-67 staining (rimming)
1. The subcutaneous infiltrate: resolution

- Clinicopathologic correlation
- GM3 staining, to split out γδ lymphoma
- CD8 and Ki-67 staining (rimming)
- Genotyping, recognizing that LE panniculitis may show clonality
2. The solitary nodular infiltrate
2. The solitary nodular infiltrate

- B-lymphoid hyperplasia
2. *The solitary nodular infiltrate*

- B-lymphoid hyperplasia
- T-lymphoid hyperplasia
2. The solitary nodular infiltrate

- B-lymphoid hyperplasia
- T-lymphoid hyperplasia
- Small/medium pleomorphic T-cell lymphoproliferative disorder
2. The solitary nodular infiltrate

- B-lymphoid hyperplasia
- T-lymphoid hyperplasia
- Small/medium pleomorphic T-cell lymphoproliferative disorder

- Commonalities: all mixed B-cell and T-cell, all indolent
A review of the solitary cutaneous T-cell lymphomas

Cutaneous T-cell lymphomas (CTCL) account for almost 65-92% of all cutaneous lymphomas, many of which usually present with multiple lesions. However, a number of well-recognized and rare types of CTCL, including mycosis fungoides, can present in isolated fashion. These solitary lesions often run a relatively indolent clinical course but often pose diagnostic difficulties. We review histopathologically challenging solitary cutaneous T-cell lymphomas, including criteria for diagnosis, clinical course and...

Mina S. Ally¹ and Alistair Robson²

¹Department of Dermatology, Stanford University School of Medicine, Redwood City, CA, USA, and
²St. John's Institute of Dermatology, St. Thomas' Hospital, London, UK
SMPTCLPD

PD-1

CD20
2. The solitary nodular infiltrate: resolution
2. The solitary nodular infiltrate: resolution

- Clinicopathologic correlation
2. The solitary nodular infiltrate: resolution

- Clinicopathologic correlation
- Genotyping, to screen for low-grade B-cell lymphoma
2. The solitary nodular infiltrate: resolution

- Clinicopathologic correlation
- Genotyping, to screen for low-grade B-cell lymphoma
- PD-1 staining and genotyping, to screen for SMPTCLPD
3. The partly plasmacytic infiltrate
3. *The partly plasmacytic infiltrate*

- Lymphoid hyperplasia with plasmacytes
3. The partly plasmacytic infiltrate

- Lymphoid hyperplasia with plasmacytes
- Lymphoplasma
cytic plaque
3. The partly plasmacytic infiltrate

- Lymphoid hyperplasia with plasmacytes
- Lymphoplasmacytic plaque
- Cutaneous plasmacytosis
3. *The partly plasmacytic infiltrate*

- Lymphoid hyperplasia with plasmacytes
- Lymphoplasmacytic plaque
- Cutaneous plasmacytosis
- Marginal zone lymphoma
3. *The partly plasmacytic infiltrate*

- Lymphoid hyperplasia with plasmacytes
- Lymphoplasmacytic plaque
- Cutaneous plasmacytosis
- Marginal zone lymphoma
- Cutaneous plasmacytoma or plasmablastic lymphoma
Situation:

- Biopsy showed a partially plasmacytic infiltrate
- Kappa/lambda staining showed ? light chain restriction
- Report voiced concern for possible MALT-type lymphoma
Lymphoplasmacytic plaque in children: a report of two new cases with review of the literature

Lymphoplasmacytic plaque in children has been proposed as a rare, emerging clinicopathologic entity characterized by solitary, extratruncal, asymptomatic papules and plaques that are typically found in healthy young Caucasian females. Biopsy of these lesions reveals a dermal lymphoplasmacytic infiltrate with or without epithelioid granulomas. Two unique patients with lymphoplasmacytic plaque in children are presented in this report, including a 26-month-old female with a lesion on her finger, who represents both the youngest described patient and the first documented with a finger lesion, as well as a 17-year-old young woman with a left thigh lesion, who represents the patient with the longest clinically and histopathologically observed lesion to date. These two additional patients corroborate the experience of the authors in favor of lymphoplasmacytic plaque as a distinct clinicopathologic entity in children.

Dennis A. Porto¹, Stephanie Sutton², Joshua B. Wilson³, Richard K. Scupham⁴, Mary S. Stone¹ and Vincent Liu¹

¹Department of Dermatology, University of Iowa, Iowa City, IA, USA
²University of Nebraska Medical Center, Omaha, NE, USA
³Dermatology, P.C., West Des Moines, IA, USA, and
⁴Iowa Pathology Associates, P.C., Des Moines, IA, USA
3. The partly plasmacytic infiltrate: resolution

• Clinicopathologic correlation
3. The partly plasmacytic infiltrate: resolution

- Clinicopathologic correlation
- κ/λ immunostaining (suboptimal)
3. *The partly plasmacytic infiltrate: resolution*

- Clinicopathologic correlation
- $\kappa/\lambda$ immunostaining (suboptimal)
- $\kappa/\lambda$ *in situ* hybridization (ISH)
3. The partly plasmacytic infiltrate: resolution

- Clinicopathologic correlation
- κ/λ immunostaining (suboptimal)
- κ/λ in situ hybridization (ISH)
- Genotyping for B-cell clonality
4. The superficial lymphoid infiltrate
“Useful” ambiguous diagnosis:

- “Atypical lymphoid infiltrate”
- “the differential is between lymphoma and pseudolymphoma; gene rearrangement analysis will be completed to screen for clonality”
If a differential...

• is between two different dermatitides requiring similar therapy, consider a therapeutic trial

• is between two different benign lesions (e.g. keratosis vs. verruca), it matters little
If a differential...

- is between two different types of cancer, additional testing or a second opinion may be indicated if prognosis differs; complete extirpation will be required irrespective of the ultimate diagnosis
If a differential...

- is between benignancy and malignancy or between entities of widely disparate behavior, additional testing and/or a second opinion should be pursued aggressively
Summary:

• The pathology report is a two-way dialog between clinician and pathologist: keep up your end of the conversation!

• Beware the anonymous pathologist: if you don’t have a relationship with your pathologist, you should!
Summary:

- While pathology diagnoses seem ironclad, they are often subjective and negotiable: be a negotiator!