



Banff VCA

Consensus Statements Session

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On Behalf of the Banff VCA working group

Skin Containing VCA as a Monitoring Tool for Intestinal Transplantation

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Analysis of Oxford Intestinal transplantation and VCA Patients

- Does the addition of a VCA increase the immunological burden?
- Does VCA increase the incidence of de novo DSA?
- Do de novo DSA have an impact on graft survival?

Transplanted Cohort 2008 – 2015

- 32 ITx recipients overall
- 24 isolated small bowel Tx → VCA n=12 (50%)
- 8 modified multivisceral Tx → VCA n=6 (75%)

Rejection Episodes

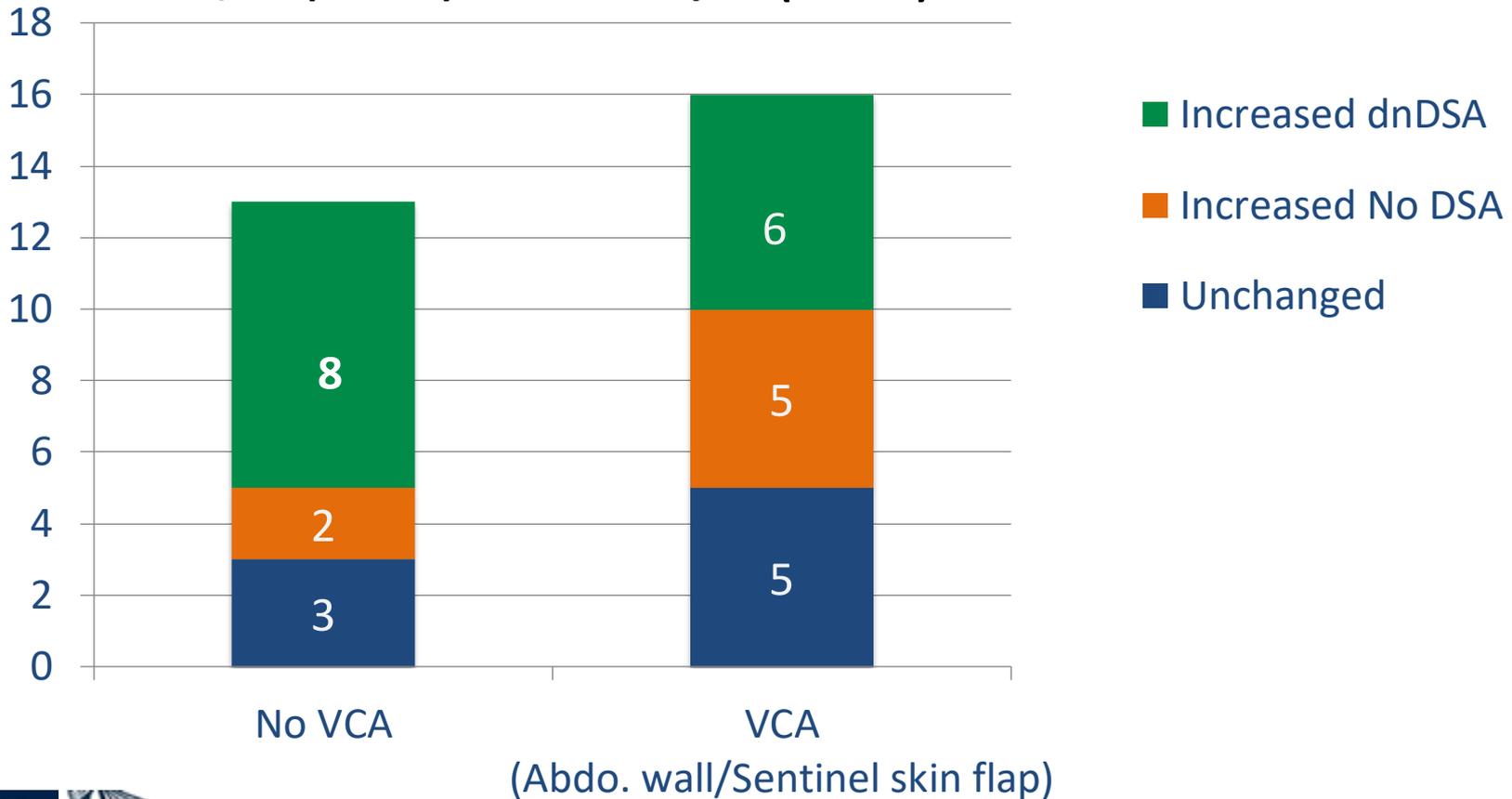
- 5 ITx rejection episodes in ITx only
(5/14, 35.7%)
- 3 ITx rejection episodes in ITx+VCA
(3/18, 16.7%)
- 7 Skin rejection episodes in ITx+VCA
(7/18, 38.9%)
- NO bowel rejection without skin rejection!

Post Transplant Sensitisation

De novo DSA post transplant

8/13 (61.5%)

6/16 (37.5%)



Results of the multivariate Cox regression analysis to evaluate independent predictors for long term graft survival

Characteristic	Wald	HR	95% CI	<i>p</i> value
Recipient age at Tx	7.668	1.189	1.052 - 1.344	0.006
Existence of dnDSA	8.135			0.043
dnDSA class I	2.207	6.107	0.300 - 124.326	0.137
dnDSA class II	1.705	7.028	0.376 – 131.216	0.192
dnDSA class I+II	7.912	45.306	3.178 – 645.875	0.005

Summary

- Skin containing VCA seems to be a future leader for diagnosis of rejection – sentinel skin
- Combining an intestinal transplant with an abdominal wall VCA does not increase the incidence of *de novo* DSA
- Multivariate analysis showed that the development of *de novo* DSA in intestinal transplantation is detrimental to the long-term survival of the graft

VCA pathologic scoring system in a preclinical model

Ivy Rosales, M.D.

Boston, MA, USA

A systematic pathologic component scoring system for skin-containing VCA was developed using porcine samples.

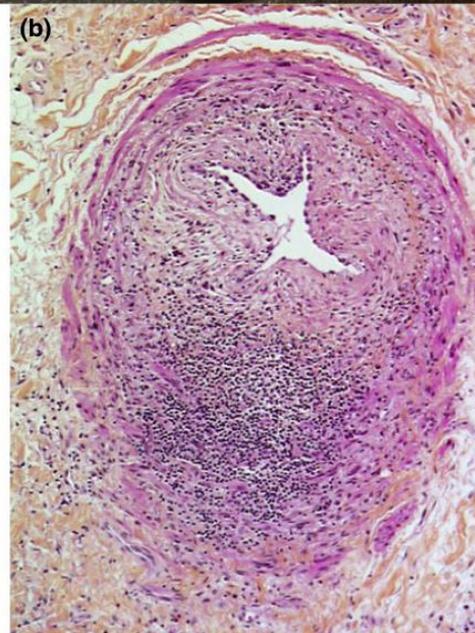
Conclusions:

- Semi-quantitative systematic pathologic component scoring system that complements the Banff 2007 Working Classification
 - Sufficient reproducibility
 - Correlation with outcome
 - Offers opportunity for validation in clinical samples
- Vascular lesions merit attention and inclusion in VCA pathologic evaluation

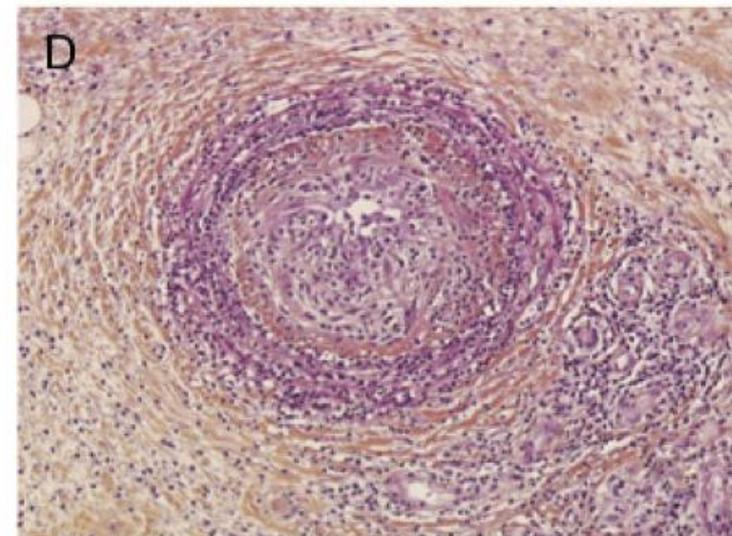
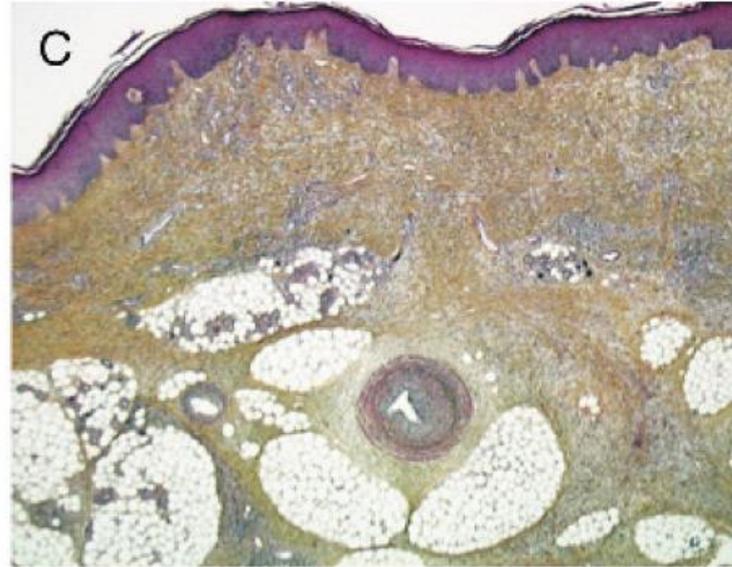
Jean Kanitakis, M.D. PhD

Lyon, France

Graft Vasculopathy in the skin

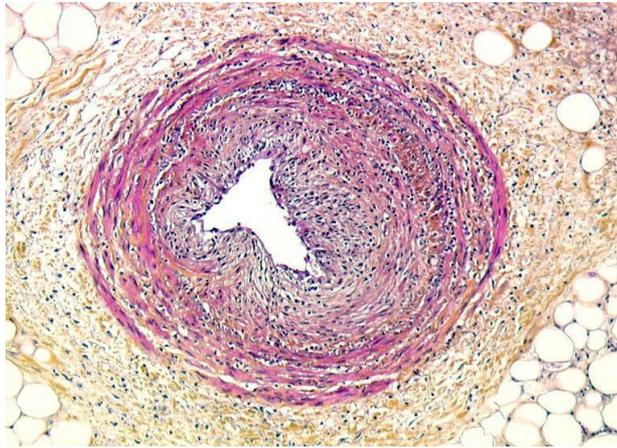


Vasculopathy in the skin

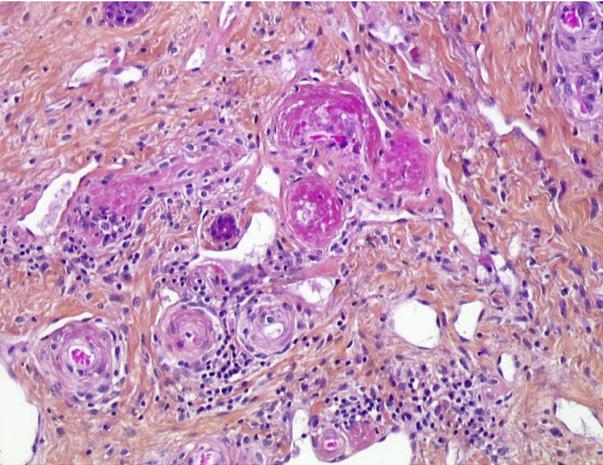


Allograft vasculopathy - Finger amputation

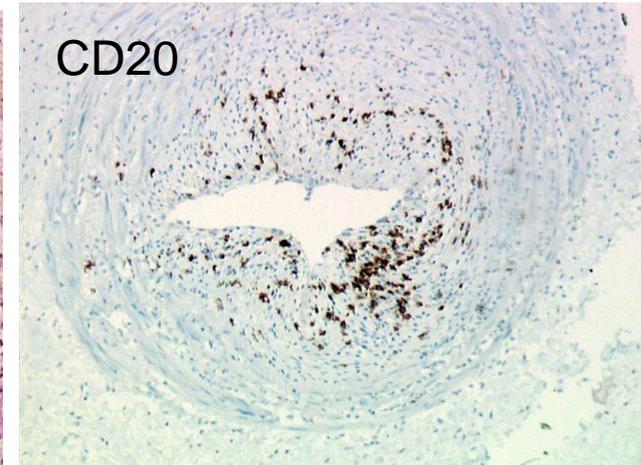
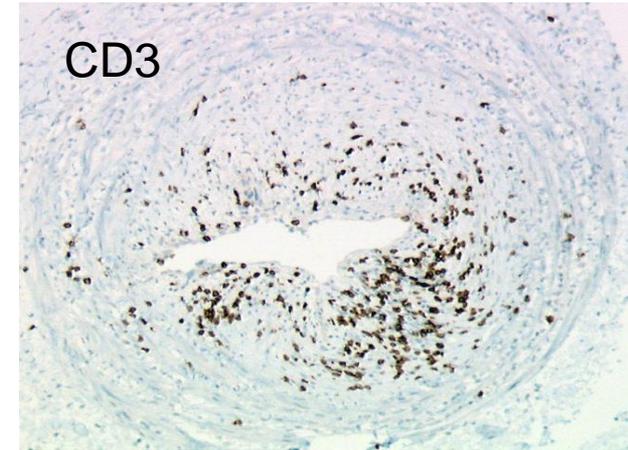
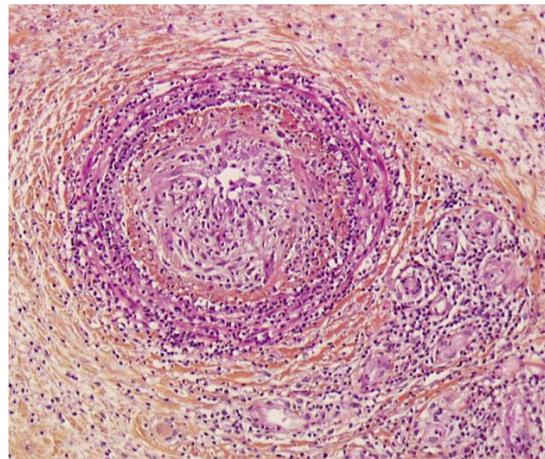
Intimal thickening
myointimal proliferation



Arteritis



Capillary thrombosis



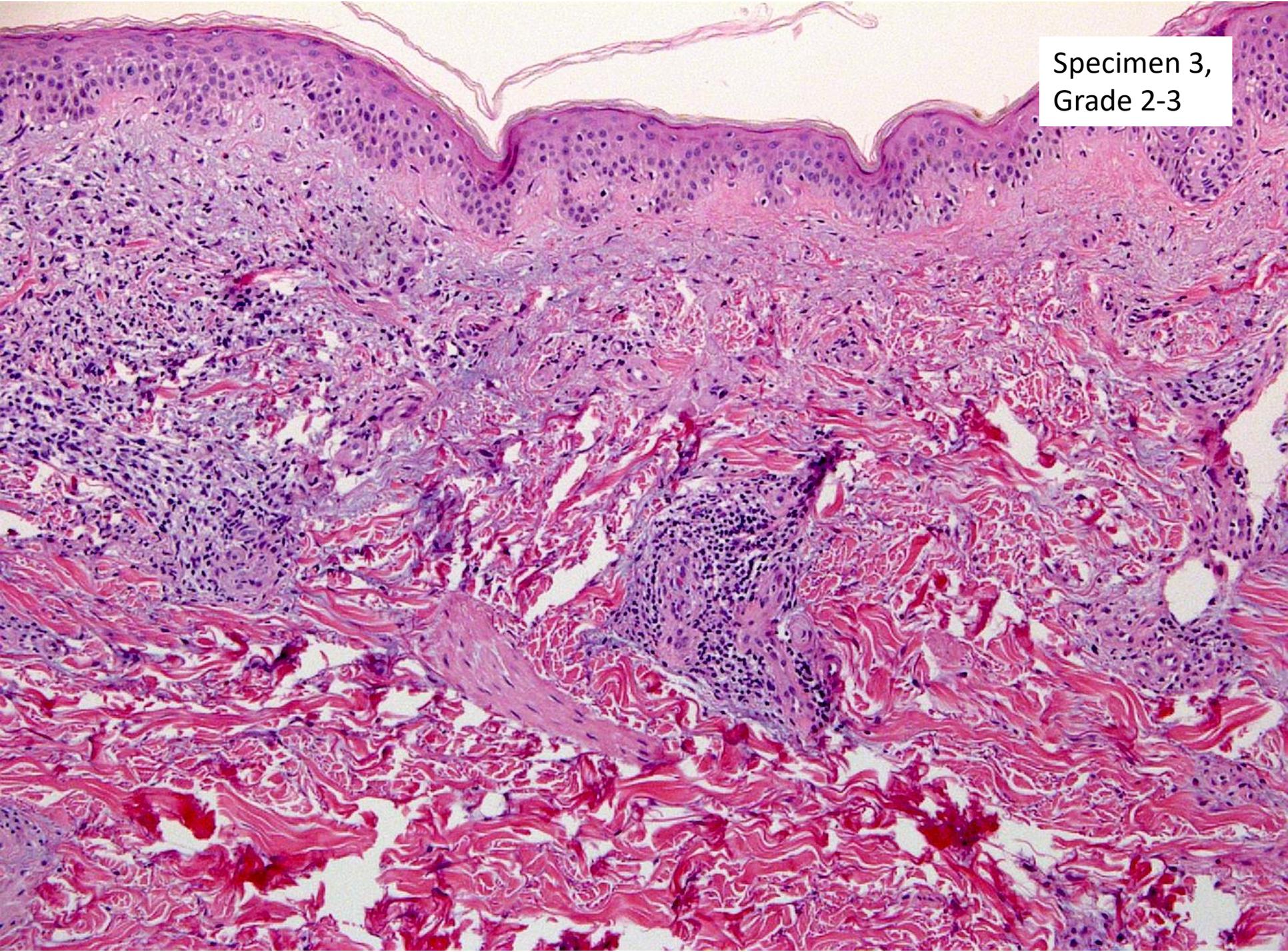
The role of immunohistochemistry and additional tools in the diagnosis of VCA skin rejection

David Elder, Philadelphia, USA

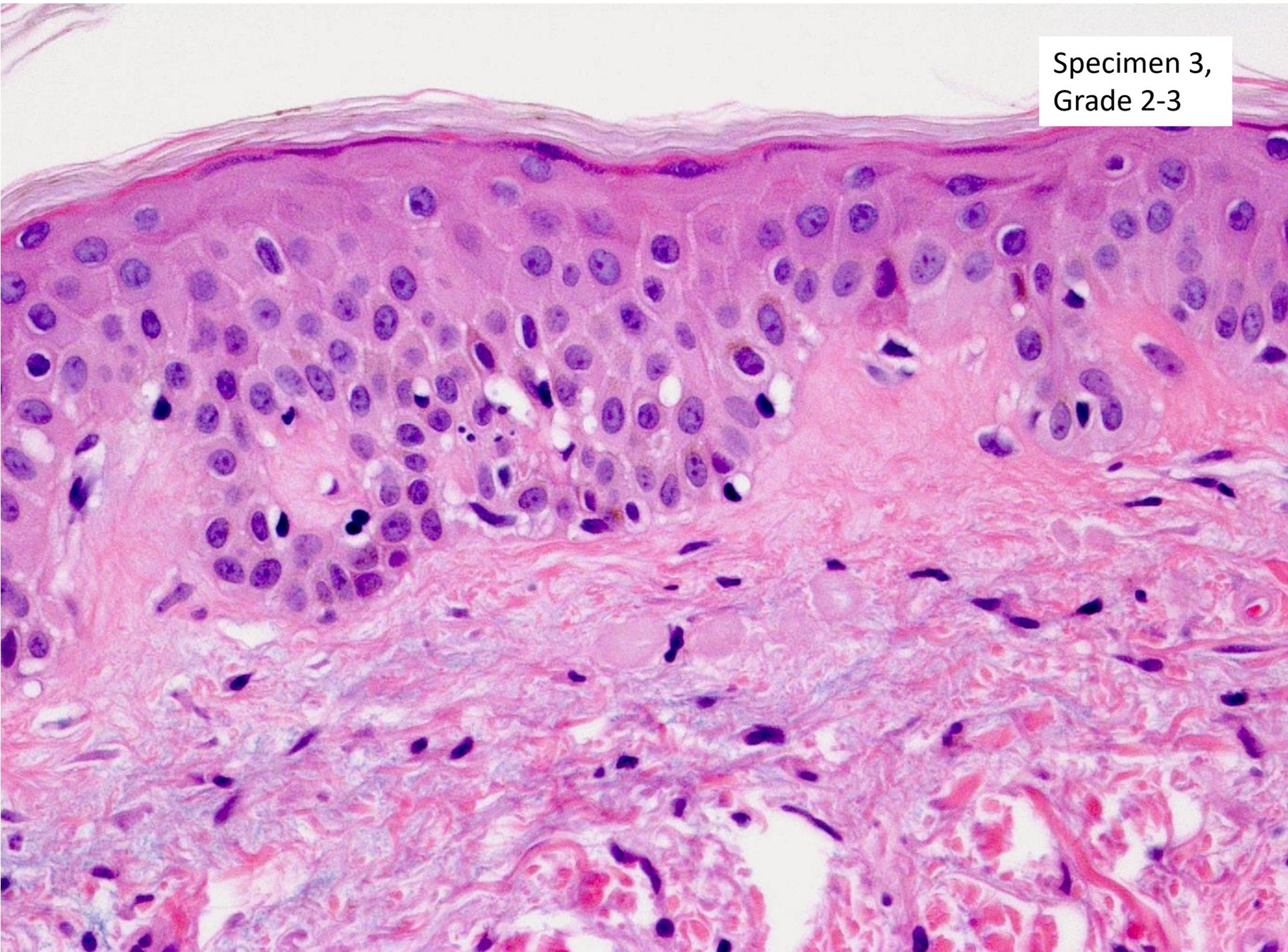
Three Biopsies from a Patient with Bilateral Hand Transplants

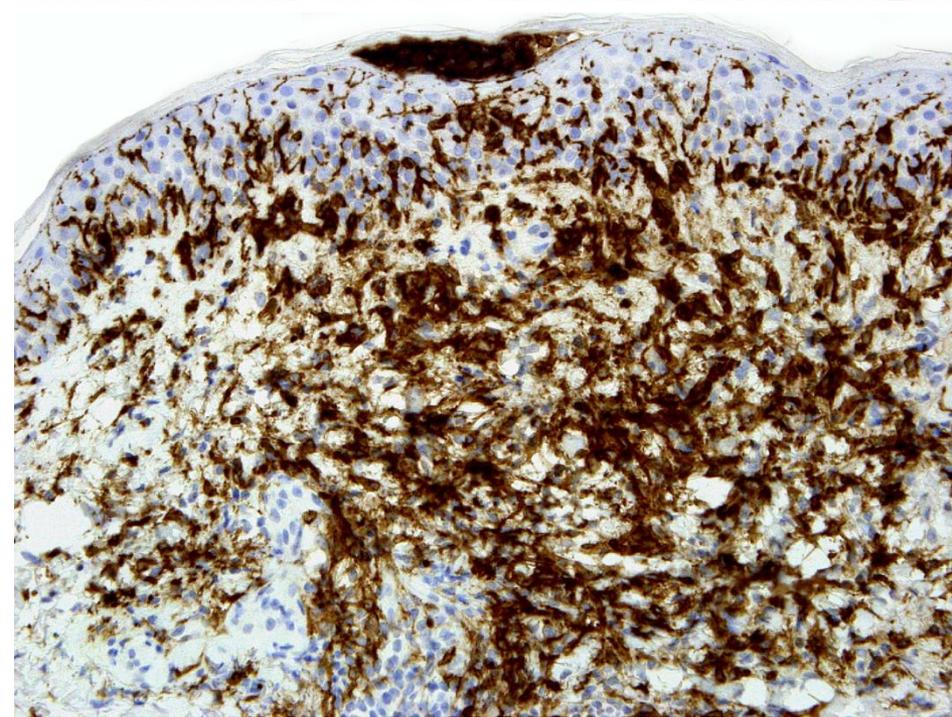
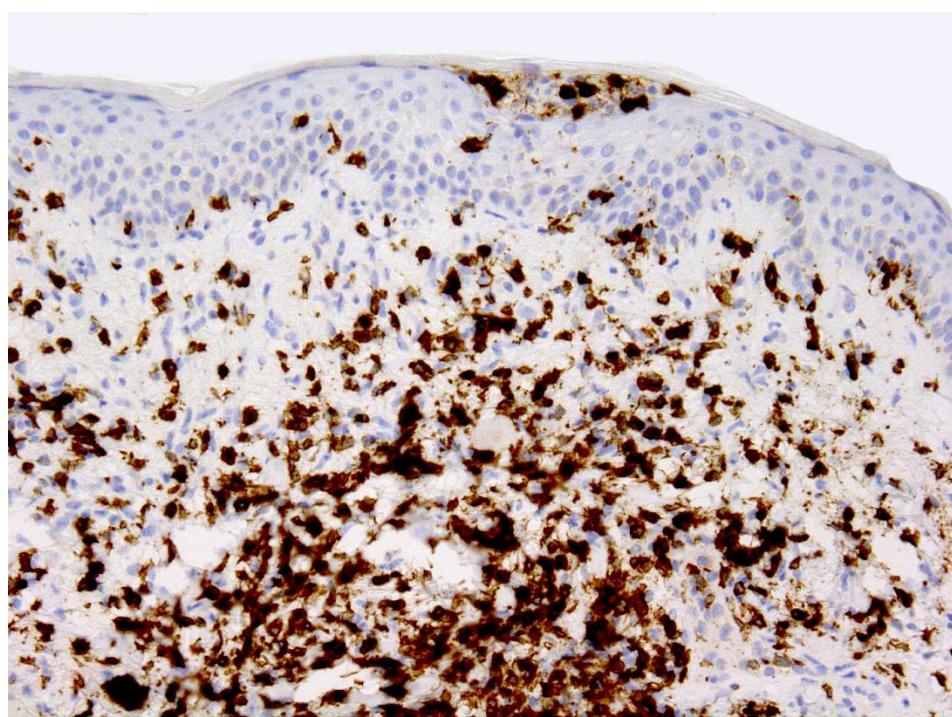
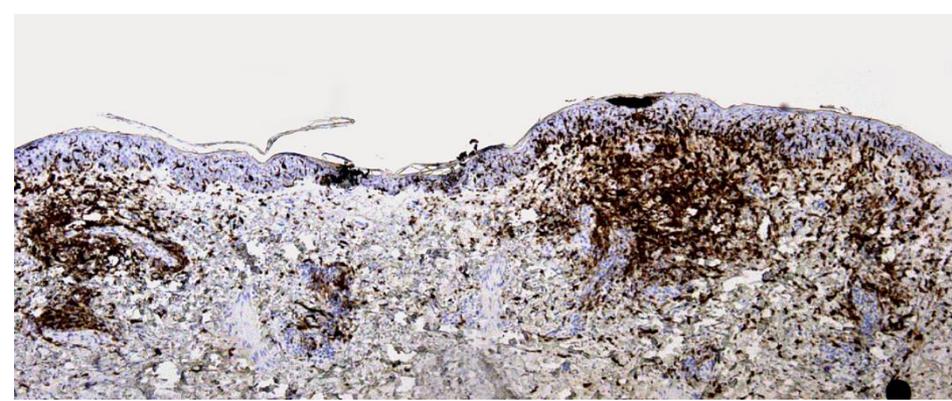
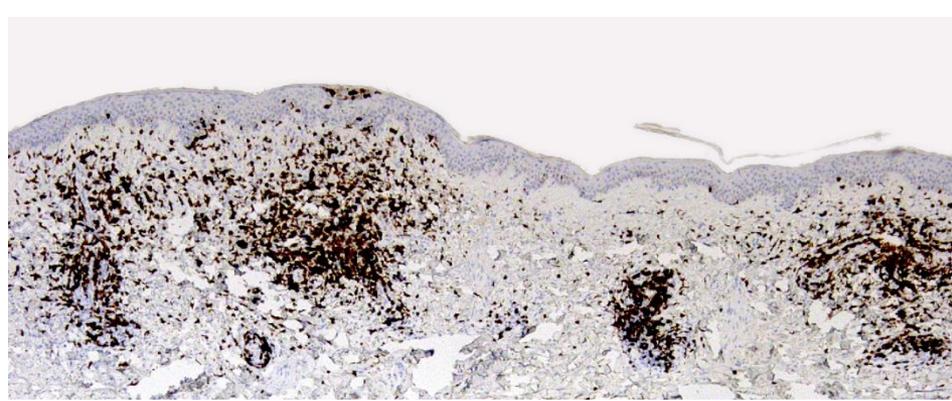
Focal rash present (Specimen 3)

Specimen 3,
Grade 2-3



Specimen 3,
Grade 2-3

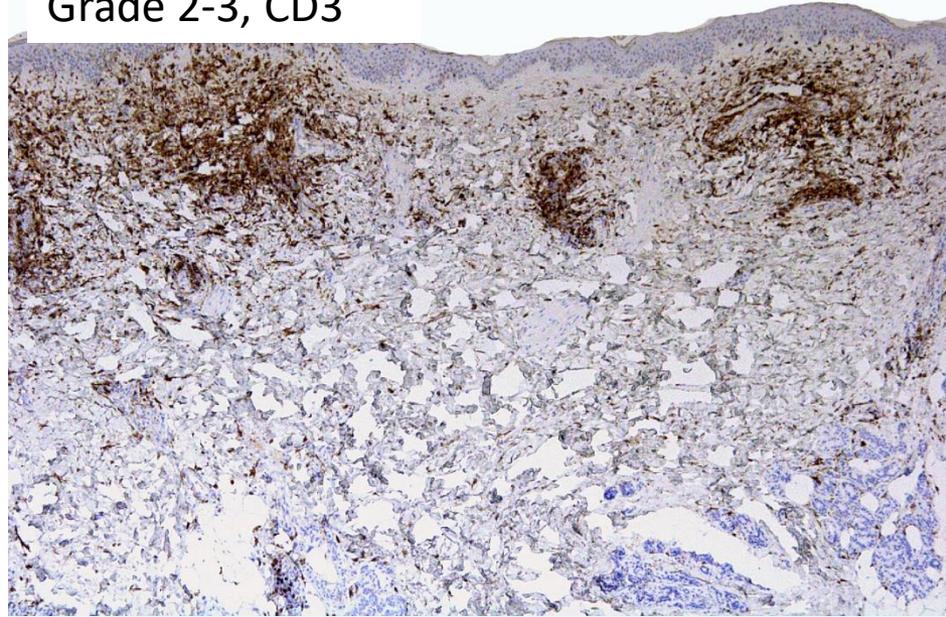




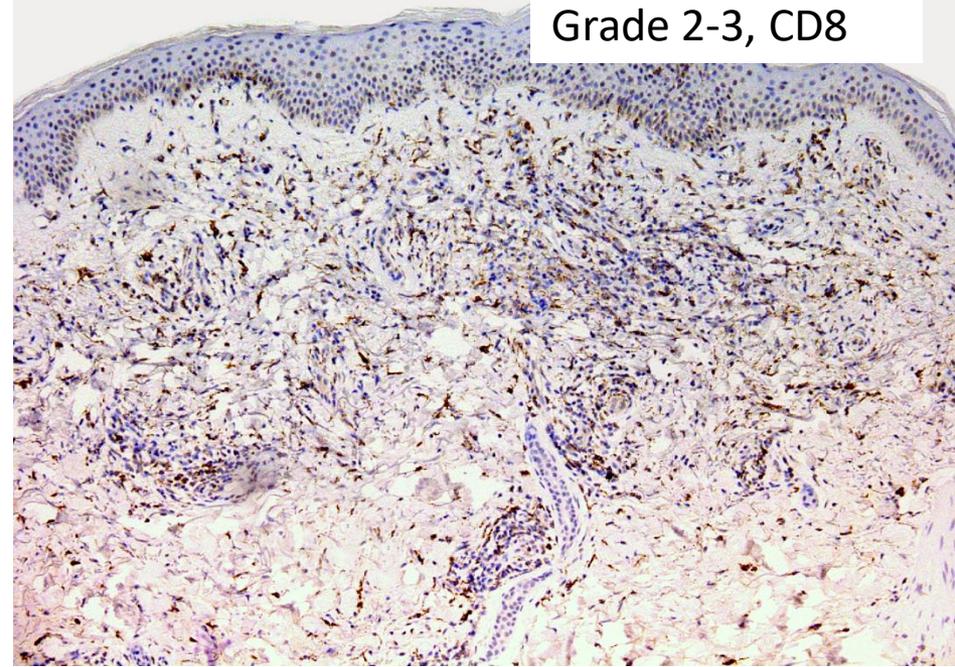
Grade 2-3, CD4

Grade 2-3, CD1a

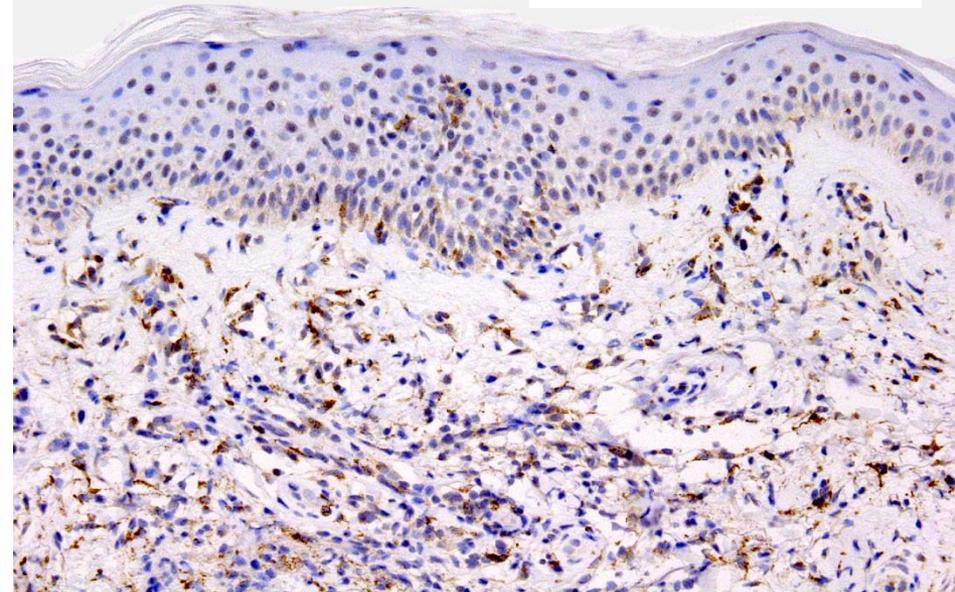
Grade 2-3, CD3



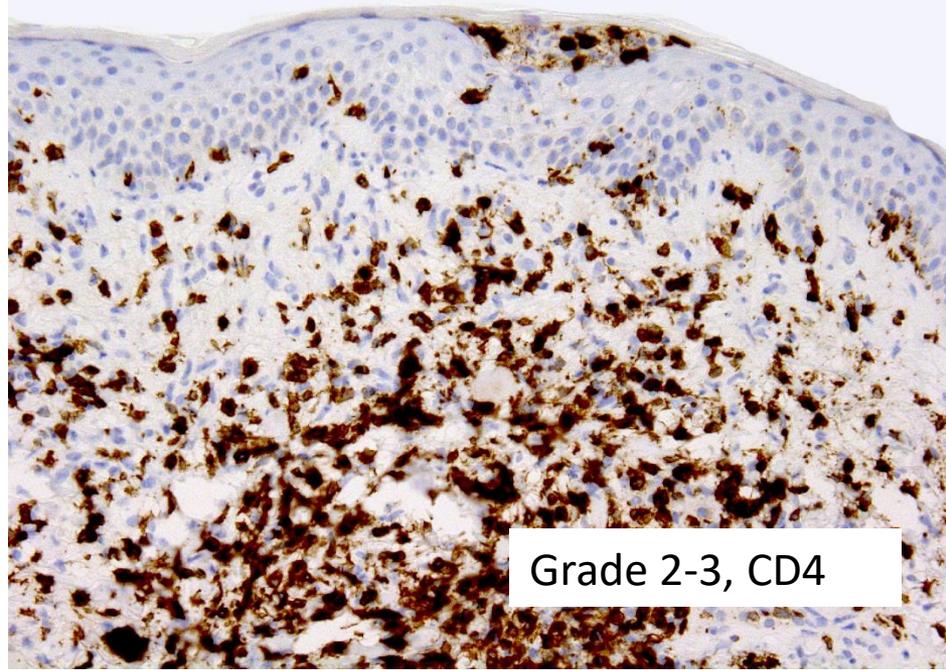
Grade 2-3, CD8

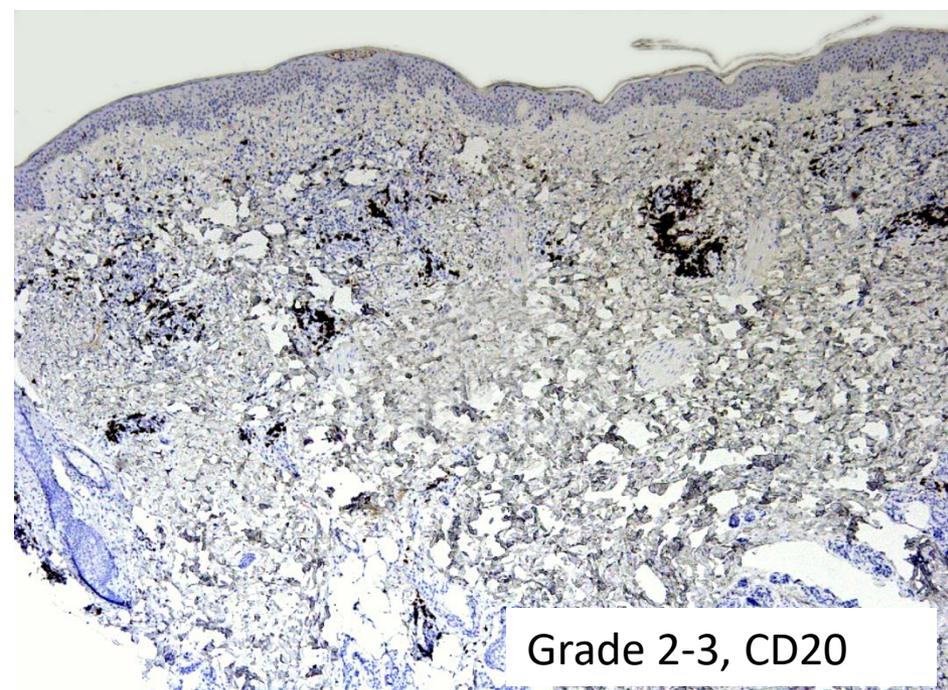
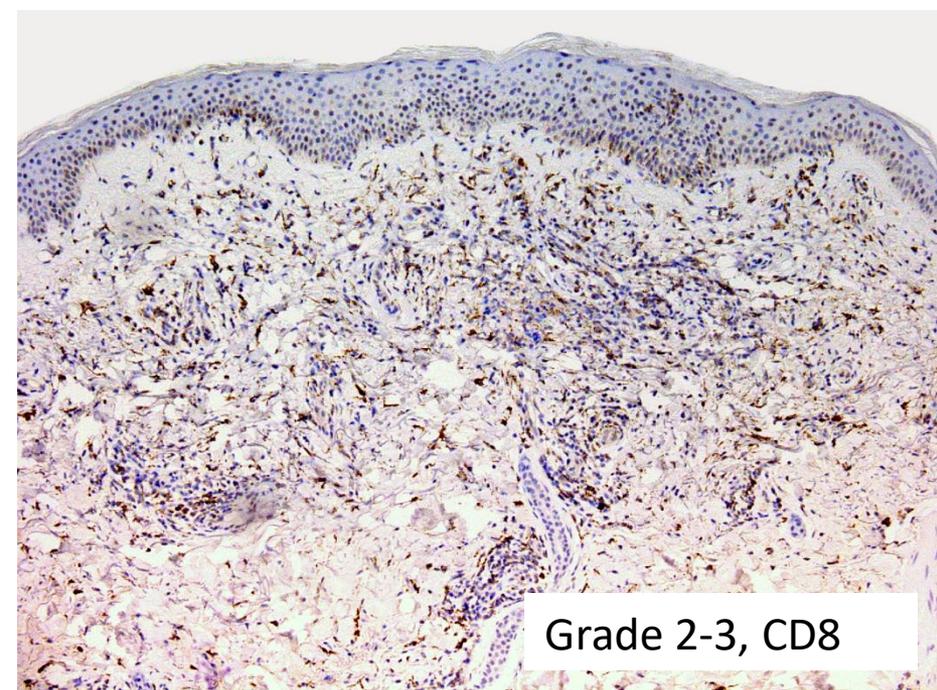
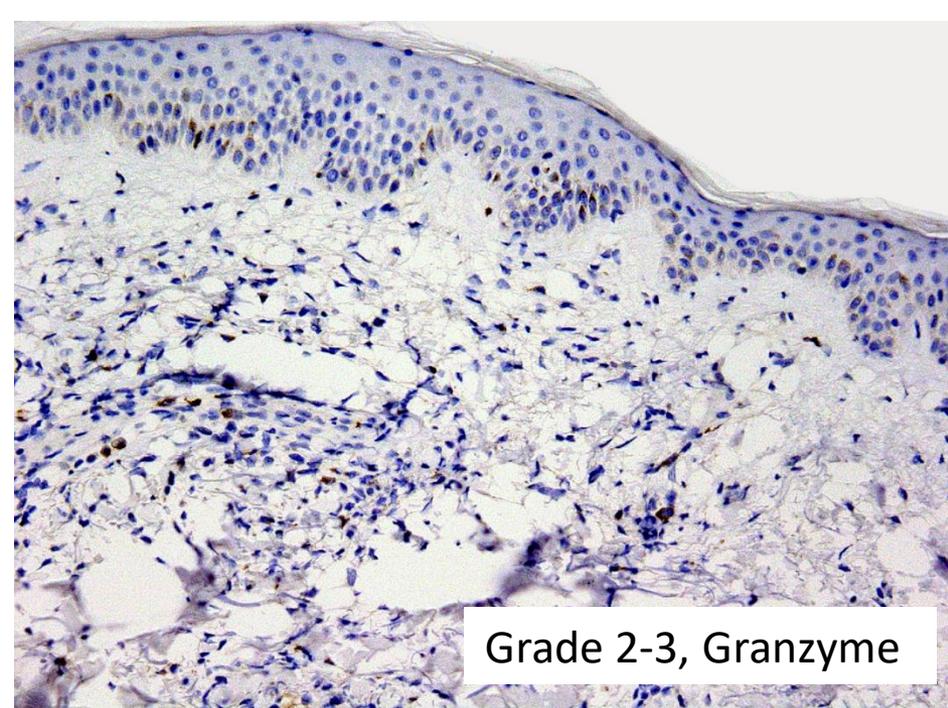
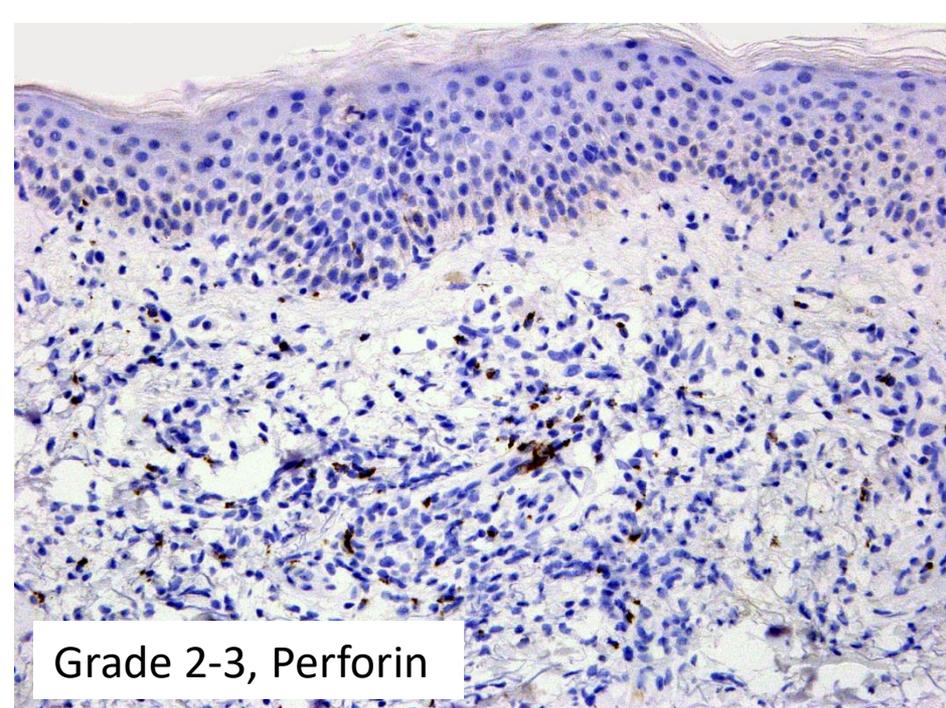


Grade 2-3, CD68



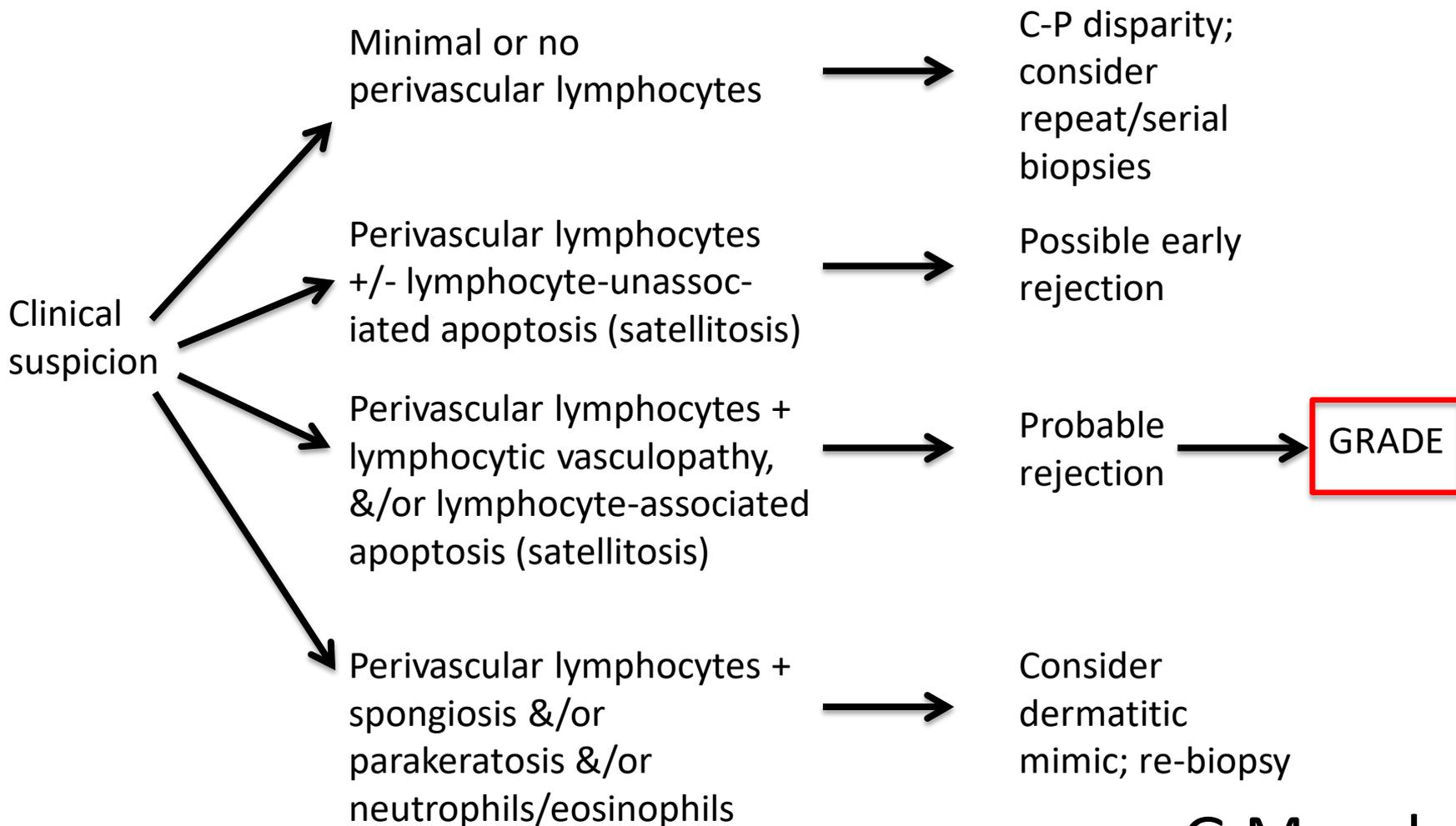
Grade 2-3, CD4





Suggestions for Revised Schema: *Probability of Rejection* after G.F. Murphy

CLINICAL ASSESSMENT	PATHOLOGY	ACTION
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G Murphy



UNIVERSITY OF
GOTHENBURG

Monitoring of human uterus transplantation with cervical biopsies - a provisional scoring system for rejection.

Johan Mölne

University of Gothenburg, Sweden

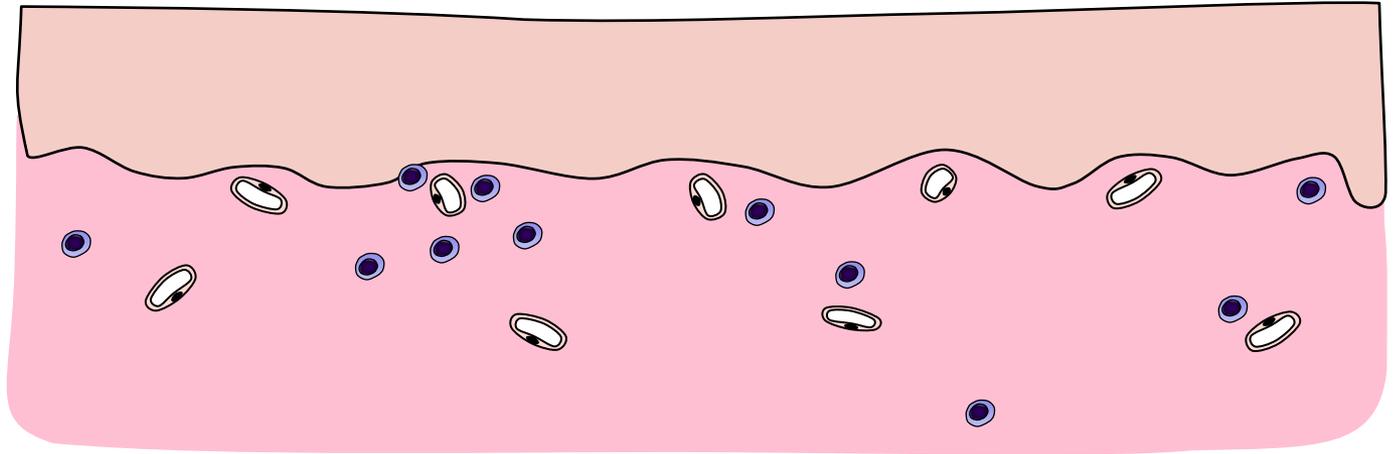
History of uterus transplantation

- First transplant in Saudi Arabia 2000
 - vascular thrombosis after \approx 3 months
- Uterus tx from deceased donor in Turkey 2011
 - technical success but no childbirth
- First child born in Gothenburg 2014
 - Brännstrom M. Lancet 2015; 385: 607-616.
 - Utx trial started 1999, small and large animals, primates and finally humans
 - 9 women transplanted, 2 early failures
 - 6 healthy babies born so far

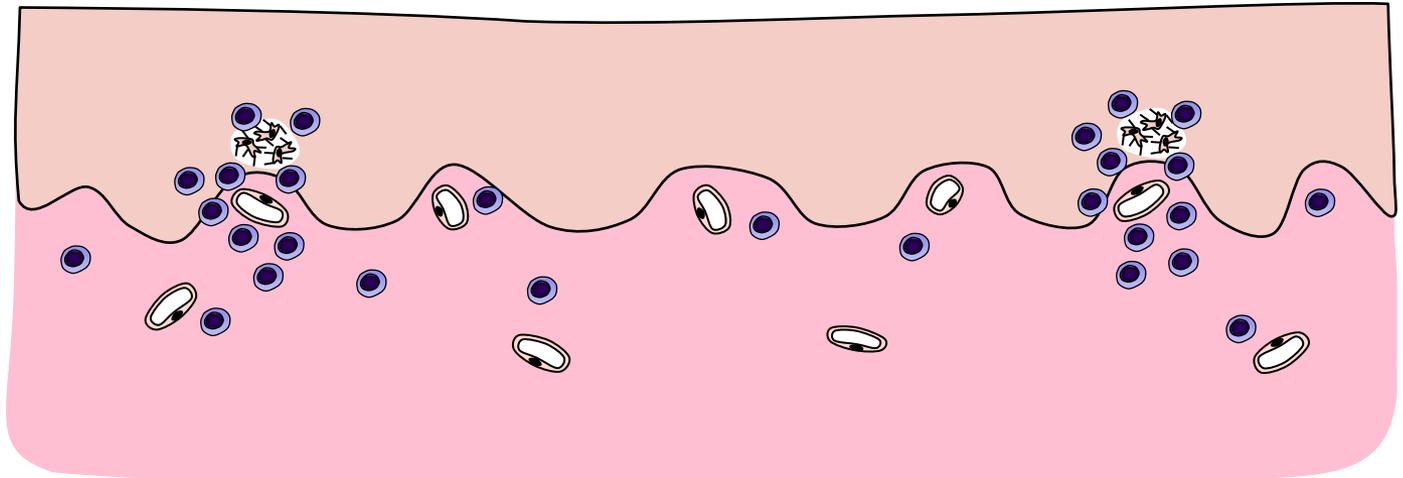
Today

- Several centers have started Utx trials
 - Nov 2015 a living donor in China
 - 2016-17 eleven living donor cases
 - 6 in Dallas, USA
 - 3 in Prague, Czech Republic
 - 1 in Tübingen, Germany
 - 1 in China
 - 2016-17 five deceased donors
 - 3 in Prague, Czech Republic
 - 1 in Cleveland, USA
 - 1 in Sao Paulo Brazil
- No children born yet
- Early failures reported in USA

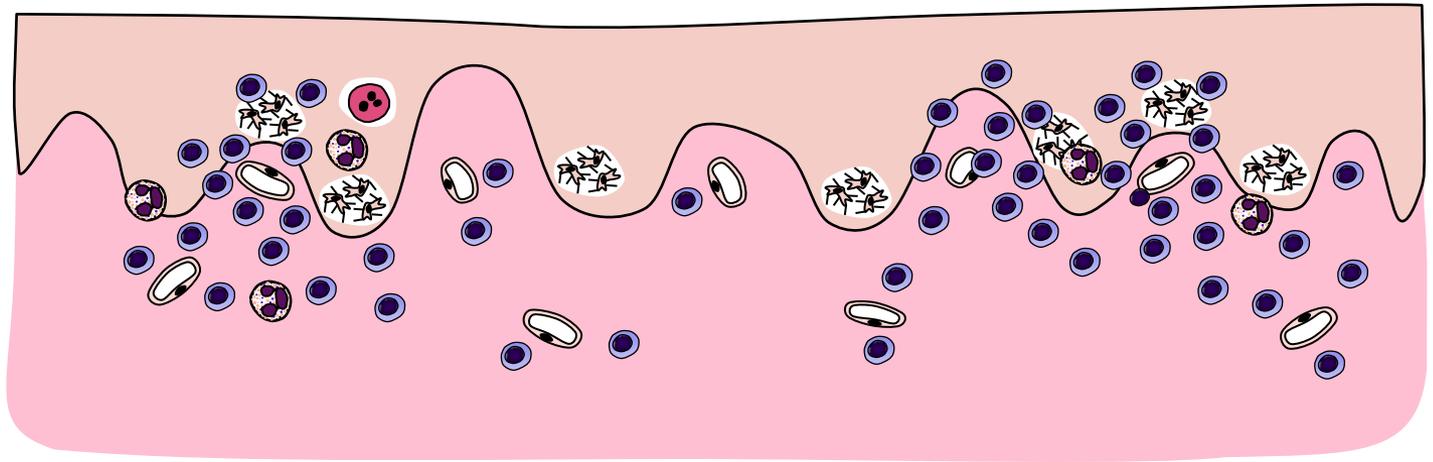
Normal
cervical
biopsy



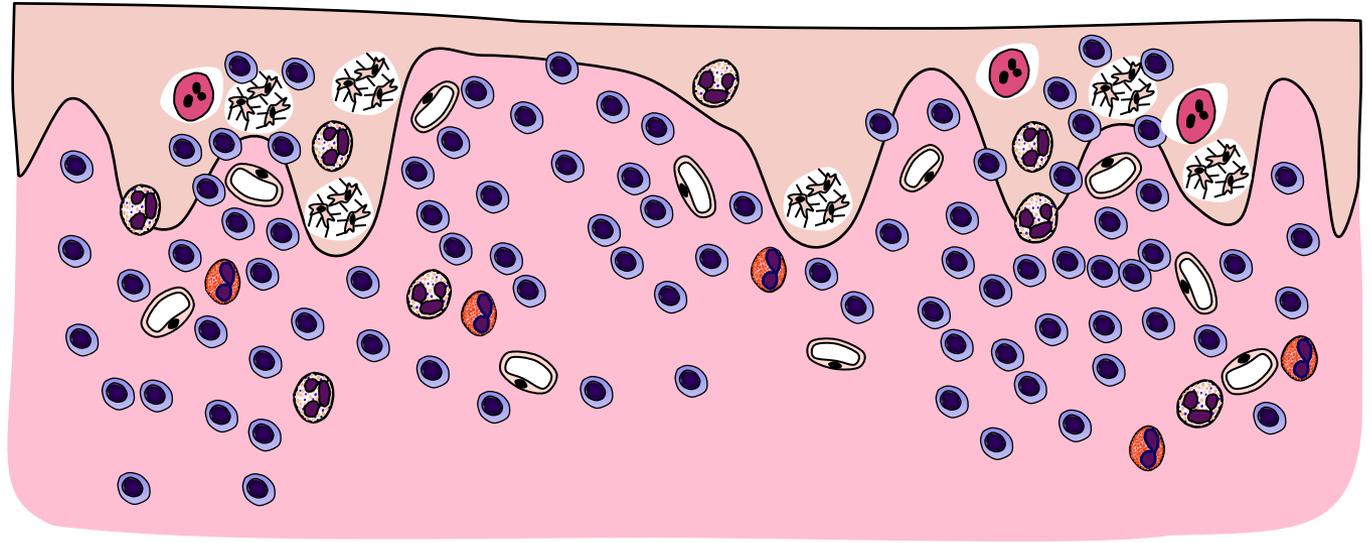
Borderline
changes



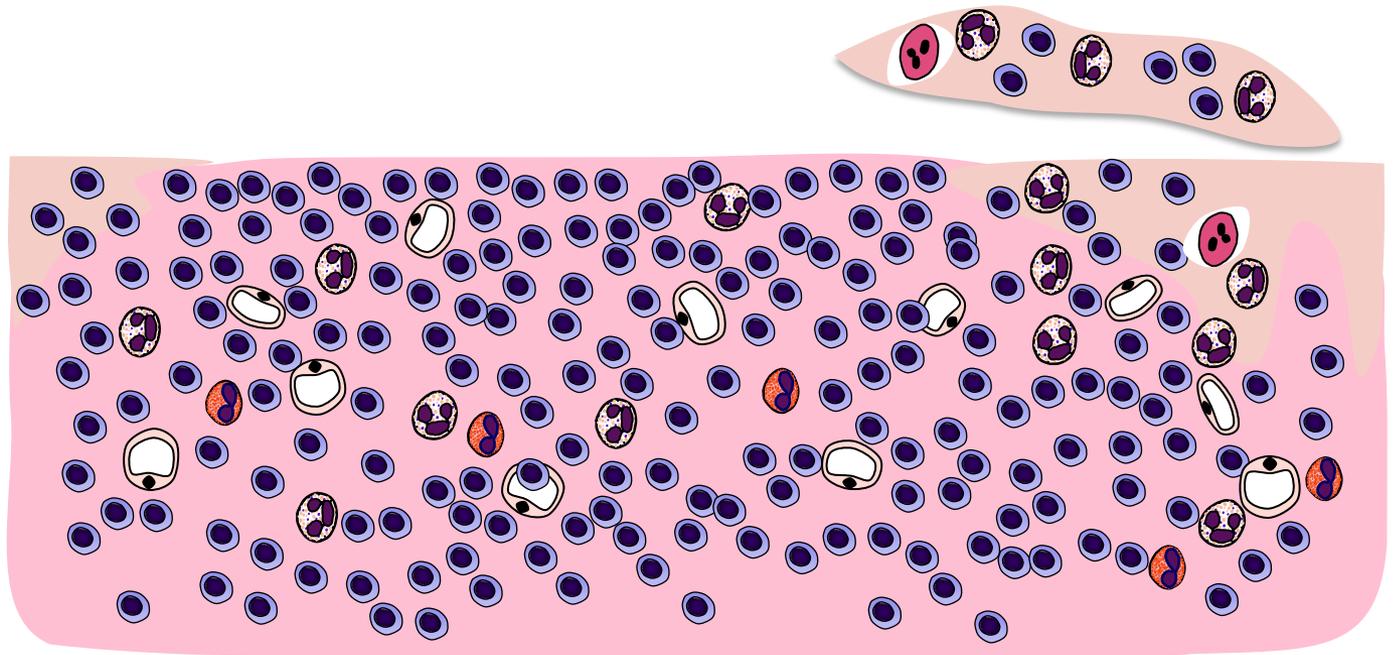
Grade 1
rejection



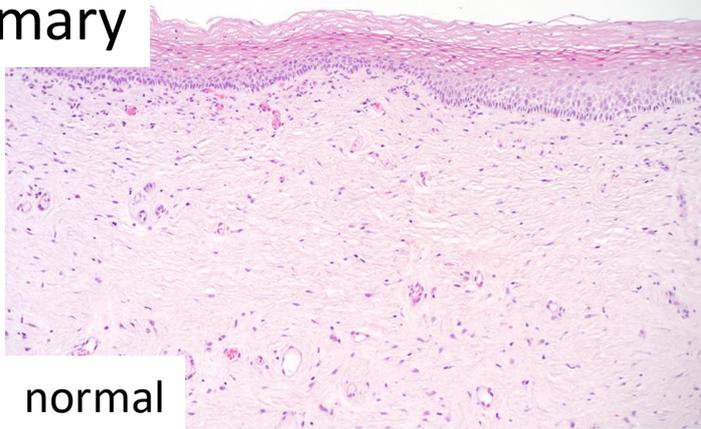
Grade 2
rejection



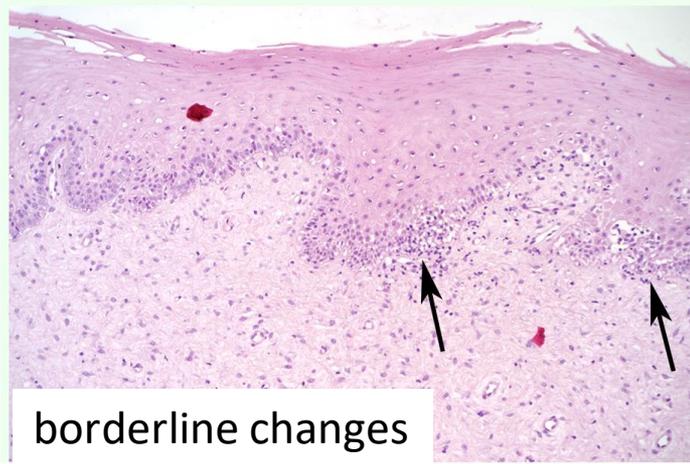
Grade 3
rejection



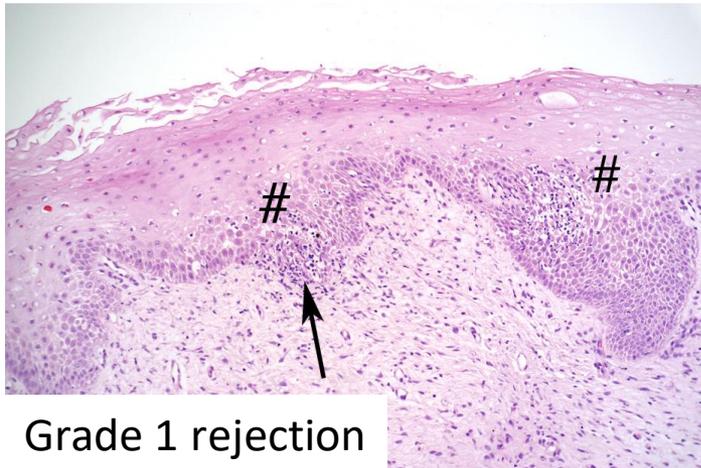
Summary



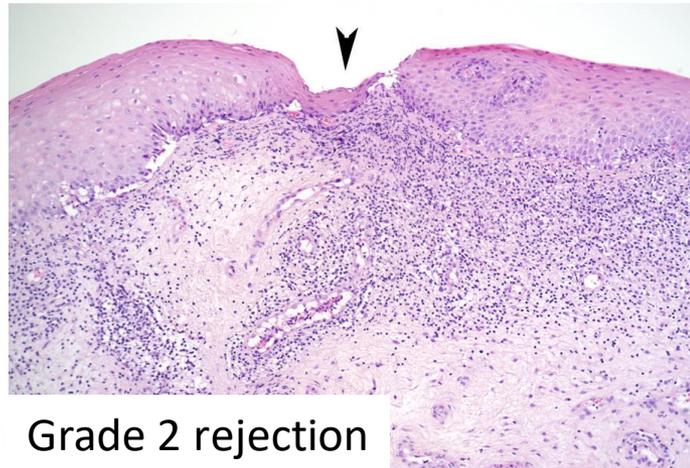
normal



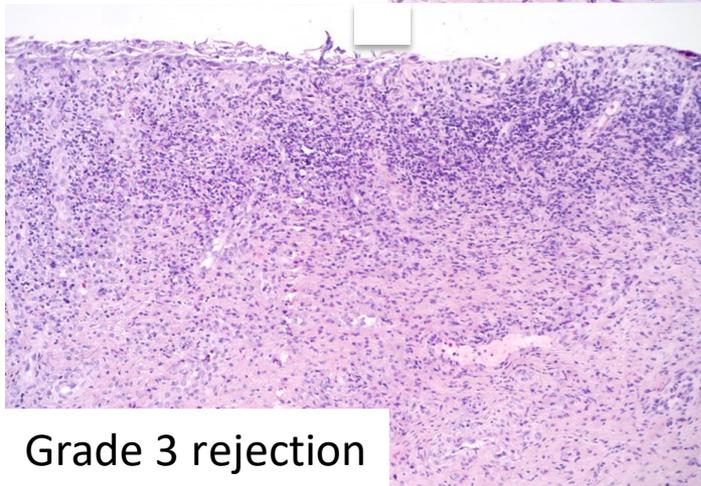
borderline changes



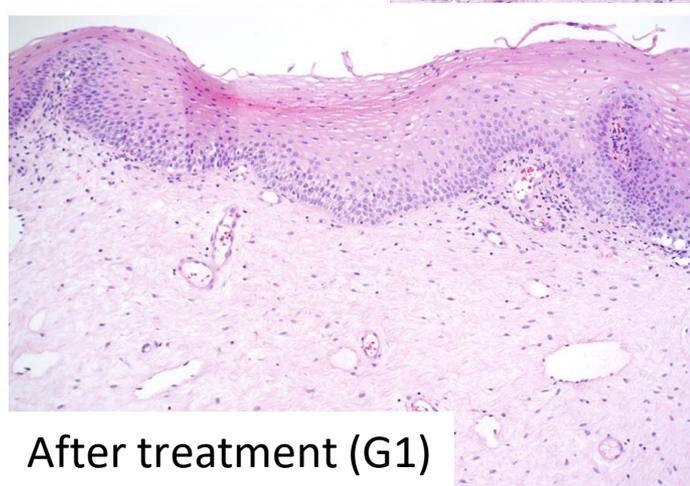
Grade 1 rejection



Grade 2 rejection



Grade 3 rejection



After treatment (G1)



Thank you