Crusted Scabies is associated with increased cytokine IL-17 secretion by skin T cells

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Scabies

- An infectious disease caused by scabies mite
- Intense itching
- Endemic in impoverished communities of developing countries
- In developed countries, outbreaks of scabies often occur in hospitals, child care and aged care centers
Crusted Scabies

• Few patients develop into crusted scabies
• Severe, sometimes deadly
• Difficult to treat
• Often the source of an scabies outbreak
Why Crusted Scabies develops?

- Mechanism unknown
- Understanding why crusted scabies develops will help to develop a new treatment for the disease
A porcine scabies model

**Mounsey et al:** A tractable experimental model for study of human and animal scabies. *PLoS neglected tropical diseases;* 2010
Increased CD3+γδ+ T cells in the skin of crusted scabies

CS: Crusted Scabies
OS: Ordinary Scabies
Skin CD3+IL17+ cells are increased in Crusted Scabies
Summary

Increased skin γδ T cells infiltration and Increased skin IL-17 secreting T cells in pigs with Crusted Scabies

Next Question:

Can targeting T cell migration to skin, or blocking skin IL-17 signalling lead to the recovery of crusted scabies
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