

### 13. T cell development/differentiation

1 unit, Alexander Rudensky, February 18, 2026

1. Stages of T cell development
2. Positive selection
3. Lineage commitment
4. Negative selection in the thymus
5. Peripheral tolerance
6. Regulatory T cells

#### Discussion papers:

Guo P, Hirano M, Herrin BR, Li J, Yu C, Sadlonova A, Cooper MD. Dual nature of the adaptive immune system in lampreys. *Nature*. 2009 Jun 11;459(7248):796-801. doi: 10.1038/nature08068. Epub 2009 May 27. Erratum in: *Nature*. 2009 Aug 20;460(7258):1044. PMID: 19474790; PMCID: PMC2714547.

Bajoghli B, Guo P, Aghaallaei N, Hirano M, Strohmeier C, McCurley N, Bockman DE, Schorpp M, Cooper MD, Boehm T. A thymus candidate in lampreys. *Nature*. 2011 Feb 3;470(7332):90-4. doi: 10.1038/nature09655. PMID: 21293377.

#### Review paper:

Ashby KM, Hogquist KA. A guide to thymic selection of T cells. *Nat Rev Immunol*. 2024 Feb;24(2):103-117. doi: 10.1038/s41577-023-00911-8. Epub 2023 Jul 18. Erratum in: *Nat Rev Immunol*. 2023 Oct;23(10):697. doi: 10.1038/s41577-023-00927-0. PMID: 37464188.