



# Ethical dimensions of phylogenetic analysis technologies

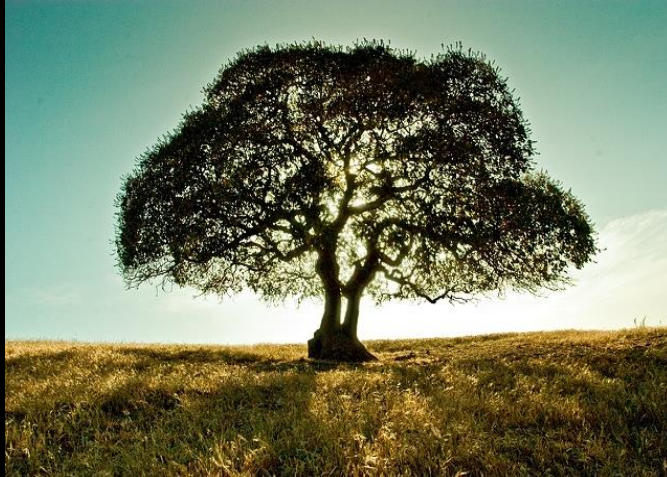
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## Outline

- What is phylogenetic analysis
- How it is used currently
- Potential negative consequences of expanded use (criminalisation of HIV transmission)
- Ethical considerations for expanded use

## Phylogenetic trees: mapping related viral sequences but not direction of transmission



## Uses of phylogenetic analysis

- To 'diagnose' transmitted drug resistant HIV in an individual (ethically unproblematic)
- As community-wide surveillance for the purposes of early detection of emergent drug-resistant HIV (ethically unproblematic)

## Other uses of phylogenetic analysis

- To identify clusters of related infections for public health action (ethically problematic)

## Principles of public health ethics

- Effectiveness
- Proportionality
- Necessity
- Least infringement
- Public justification
- Trust
- Solidarity
- Reciprocity
- Transparency

### Benefits:

- Fine or 'granular' picture of epidemic dynamic

### Risks

- Loss of public trust
- Oversimplified notions of how health promotion can be 'rolled out' to address clusters
- Increased stigma, potential criminalisation

### Conclusion

- Increasingly refined forms of surveillance has serious real and perceived risks for HIV affected communities
- These constitute legitimate ethical concerns
- Community consultation needs to be thorough, and researchers need to be prepared to face the potential for communities to veto proposals