

## BACKGROUND

- *Acanthamoeba* spp. are free-living amoebae found worldwide in soil and water
- Infections are rare, and only case reports or small case series have been published to date
- Transmission is through the skin, eyes, or lungs, and can infect multiple organ systems (*Acanthamoeba* disease)
- CDC began recommending a 5-drug regimen in 2010 for *Acanthamoeba* disease (pentamidine, sulfadiazine, miltefosine, flucytosine, and fluconazole)

## METHODS

- CDC maintains a free-living amoeba (FLA) database of U.S. laboratory-confirmed *Acanthamoeba* cases (excluding keratitis) sourced from published case reports, CDC case report forms, and CDC laboratory results
- SAS® version 9.4 software was used to calculate descriptive statistics and frequencies

## FINDINGS

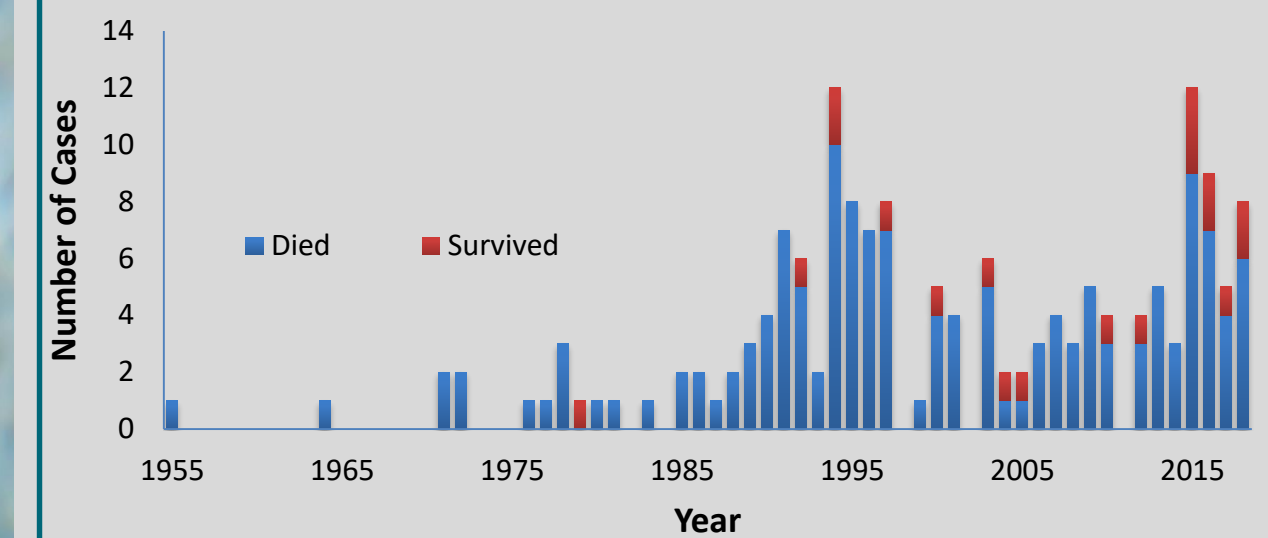
- **163 cases** of *Acanthamoeba* disease from 1956–2018
  - **Demographics**
    - Median age 42 years (range 0–83 years)
    - 71% males (114/160)
  - **Source of exposure**
    - Unknown in most cases (75%)
    - Soil and water were documented in 14 (10%) and 17 (12%) cases, respectively
  - 88% cases were **immunocompromised individuals** (136/155)
    - 66 (43%) people living with HIV (of whom 49 were classified as having AIDS)
    - 33 (21%) recipients of organ transplantation
    - 30 (19%) people diagnosed with malignancy
  - **Most common manifestations** of disease included:
    - Granulomatous amoebic encephalitis (GAE)(49%)
    - Multiple organ system involvement (25%)
    - Cutaneous lesions (20%)
    - Rhinosinusitis (6%)
  - 85% of cases with known outcome were **fatal** (105/124)
  - **Survivor subset** (n=19)
    - Median age 45 (5–77), 52% male
    - 5 (26%) diagnosed with GAE
    - 10 (53%) survivors have been since 2010. Of these, 5 (50%) received all five recommended drugs, and 8 (80%) received at least a combination of miltefosine, flucytosine, and an azole
- Contact Info:** Kevin O’Laughlin (pgv6@cdc.gov)

*Acanthamoeba* disease in the U.S. predominately affects individuals who are immunocompromised. Hallmark features are encephalitis and cutaneous lesions.

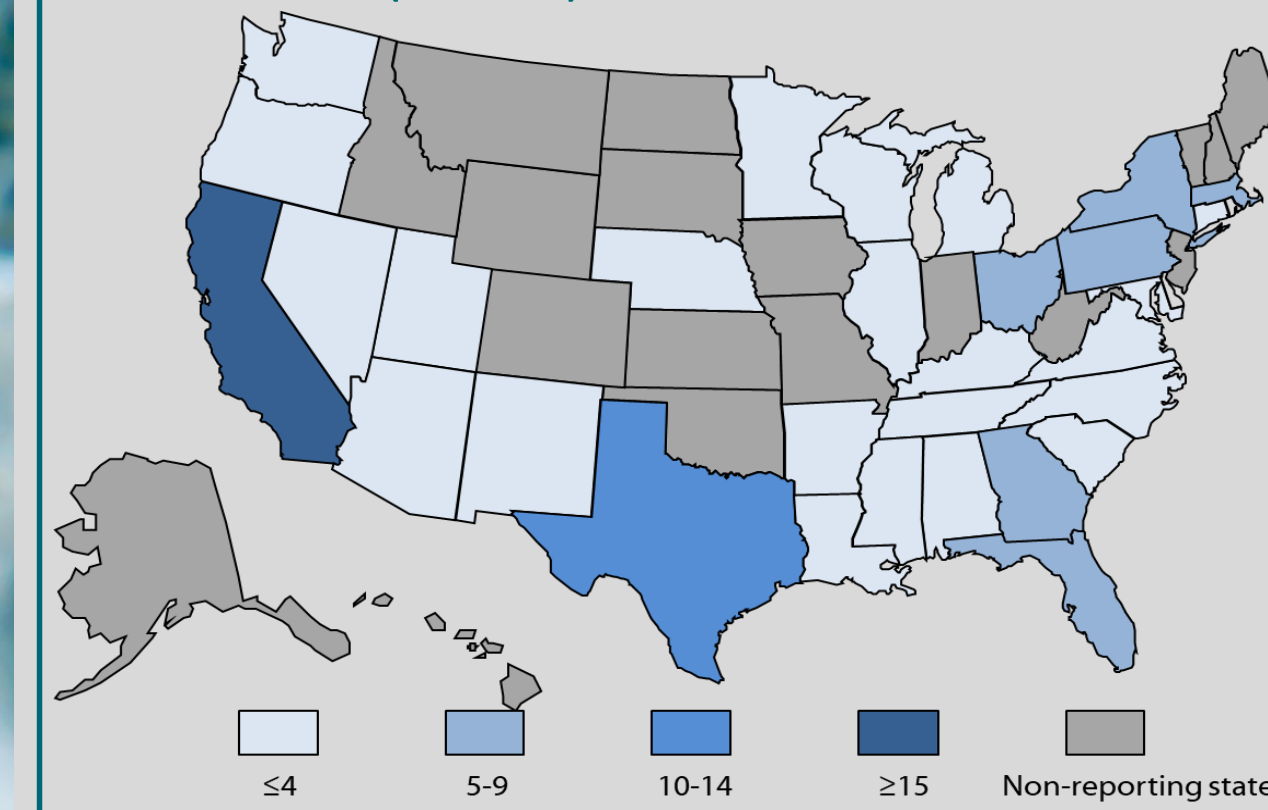


Scan here for more information about *Acanthamoeba* on the CDC website

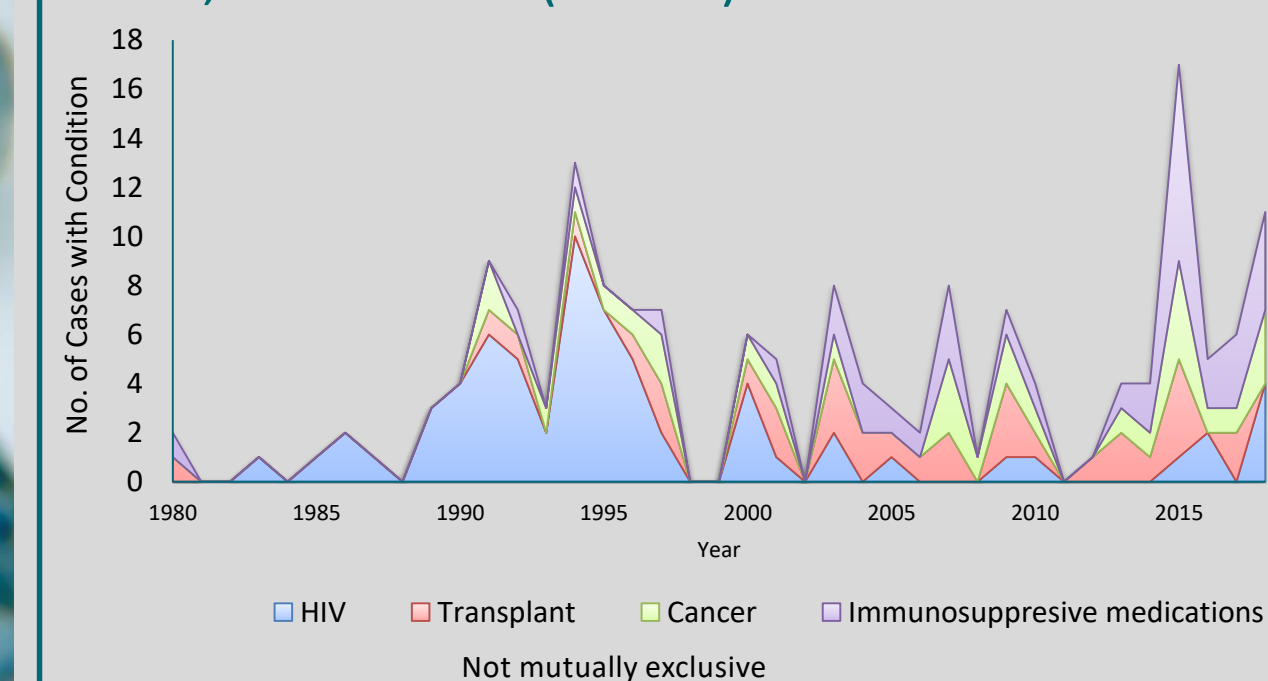
*Acanthamoeba* Cases per Year, United States, 1956–2018 (n=163)



*Acanthamoeba* Cases by State, United States, 1956–2018 (n=163)



Number of Cases by Immunocompromised State, 1956–2018 (n=136)



## 24/7 On-Call Service

For free-living amoeba diagnostic and treatment assistance, call the CDC Emergency Operations Center at **770-488-7100**

