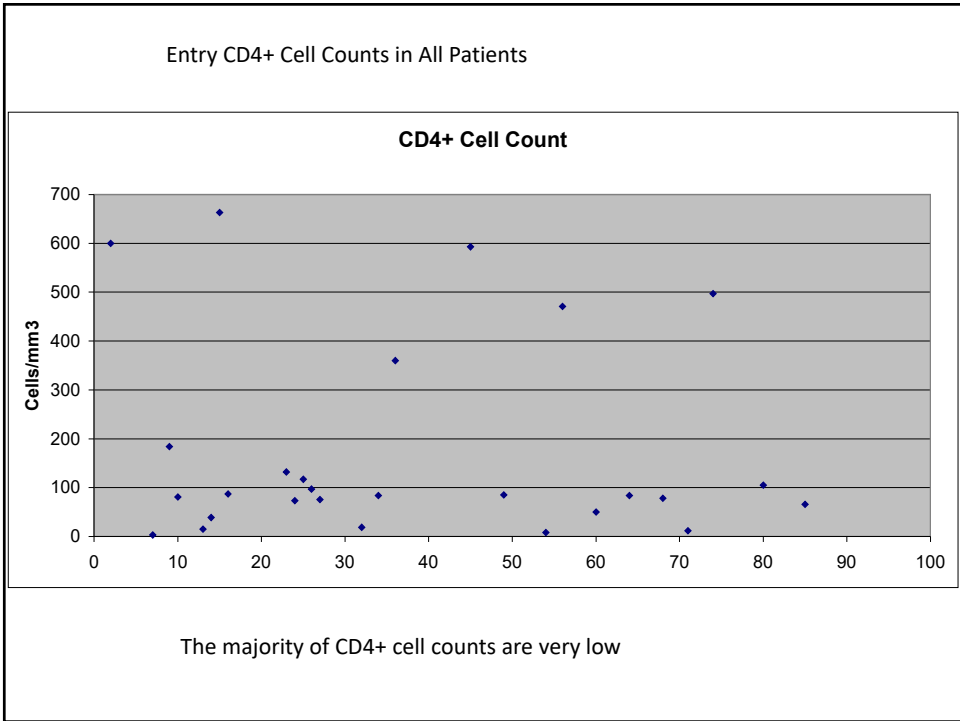


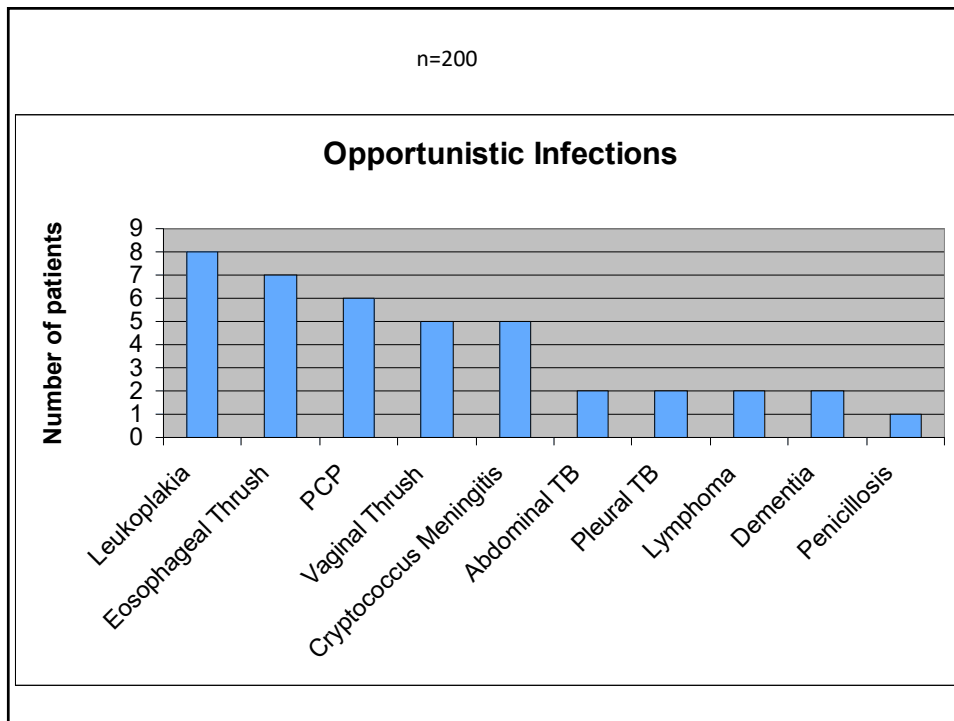
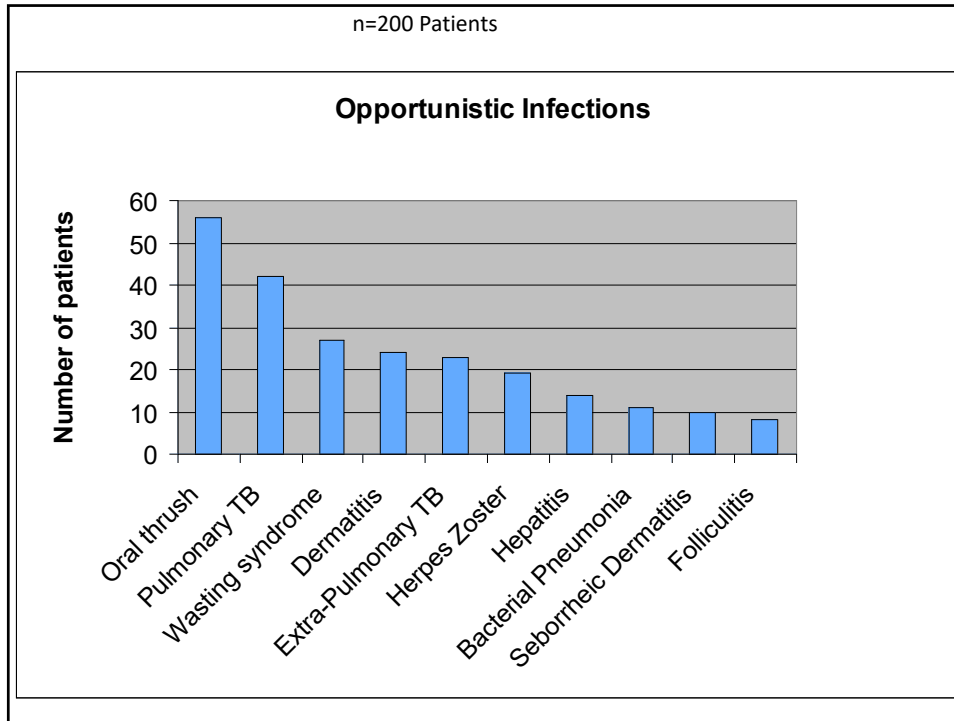
# Telemedicine: HIV and Infectious Diseases

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## HIV and Me

- First patient in 1981
- Director of first HIV Clinic in 1984
- Director of 6 others since; on 3 continents
- Absolutely necessary to physically encounter and examine the patient



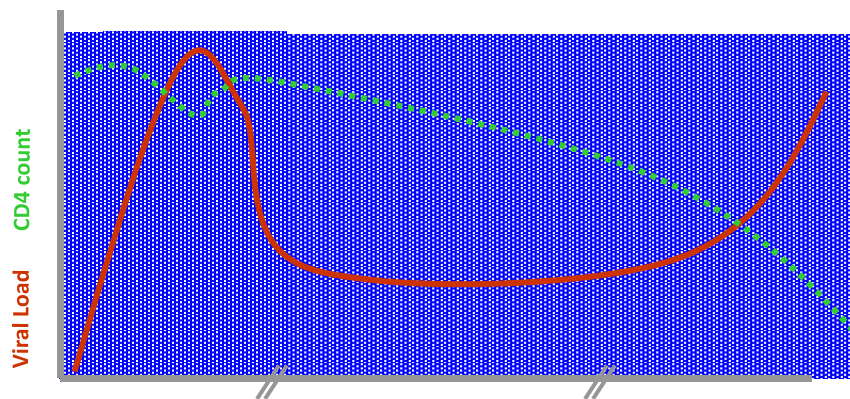


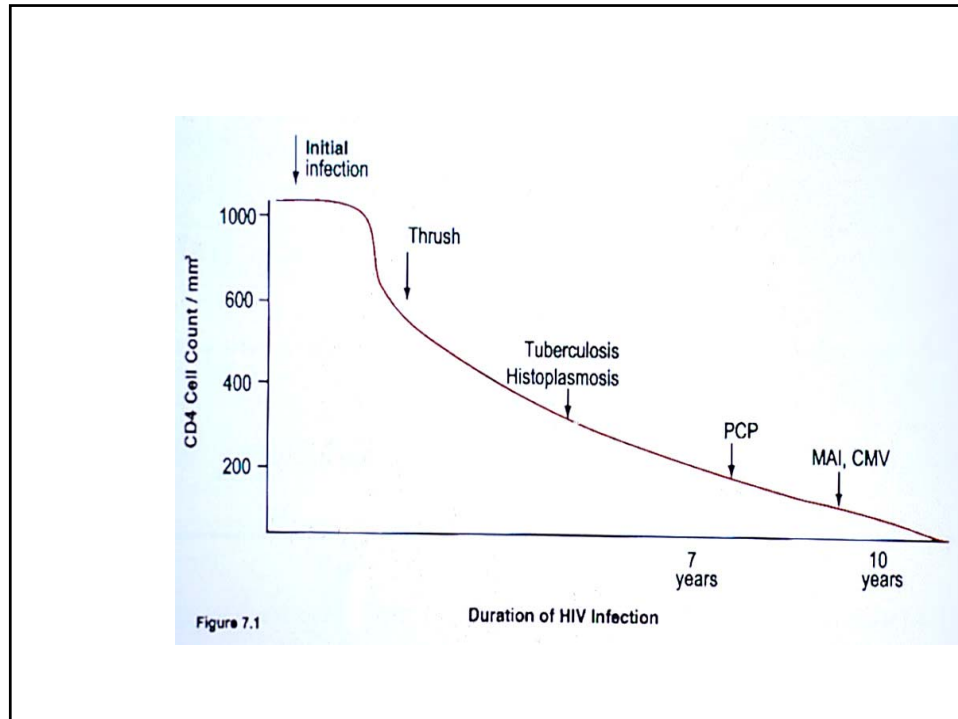
We need an effective strategy to deal with young, unemployed male IVDUs. One goal would be to foster strong support groups for medication adherence and attempt to return them to productive work.



We also must have realistic expectations. The patients are so sick that 2% have died with 5 weeks. ARV will not help all of these patients.

## Natural History of HIV-1 Infection





## HIV Treatment in 2019

- Everyone with HIV is immediately placed on anti-retroviral drugs
- With the new drugs every patient should be undetectable for HIV within 1 month; meaning disease controlled
- This preserves (or restores) immune cells
- Prevents transmission of HIV

## Anti-retroviral Therapy

- Prevents and reverses HIV frailty!
- HIV Infection-Associated Frailty: The Solution for Now is Antiretroviral Drugs: A Perspective. Klotz, Bradley, Smith, Ahmad. J Int Assoc Provid AIDS Care 20119. January
- Restores immune cell function and numbers!
- Reduction in terminally differentiated T cells in virologically controlled HIV-infected aging patients on long-term antiretroviral therapy. Behrens, Wertheimer, Klotz, Ahmad. PLoS One. 2018, June.

## The Only Required Intervention is:

- Antiretroviral Therapy (early and daily)

## Telemedicine to Correctional Facilities

- Providing HIV Telemedicine to Pima County Jail and Arizona Department of Corrections since 2007.
- The crucial and solely important intervention is the addition of anti-retroviral drugs.
- Occasional monitoring

## Current Clinical Practice

- See HIV patient once a year
- Laboratory tests twice a year

## Upcoming Programs

- HIV TelePharmacy: twice per year
- HIV TelePrEP statewide
- HIV clinic exclusively on Telemedicine

## Conclusions

- HIV is a diseases made for Telemedicine
- Telemedicine is tailor-made for HIV