National HIV Curriculum

Ibalizumab (*Trogarzo*)

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AETC AIDS Education & Training Center Program

Ibalizumab (*Trogarzo*)

Trogarzo
[tro-gar-zo]

Entry Inhibitor

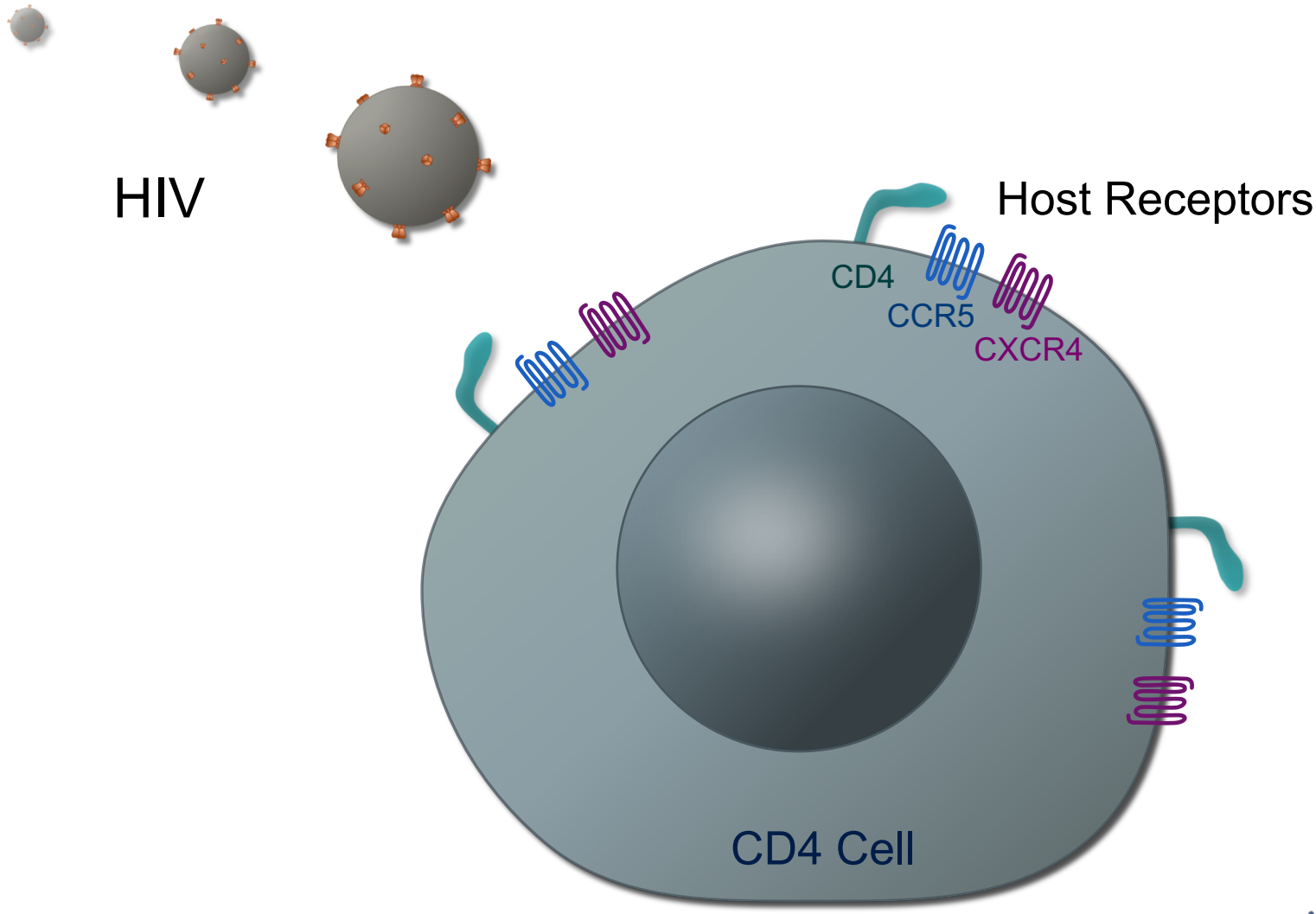
Intravenous Infusion: Loading Dose followed by Dosing Every 2 Weeks

Source: Photograph courtesy of Theratechnologies, Inc.

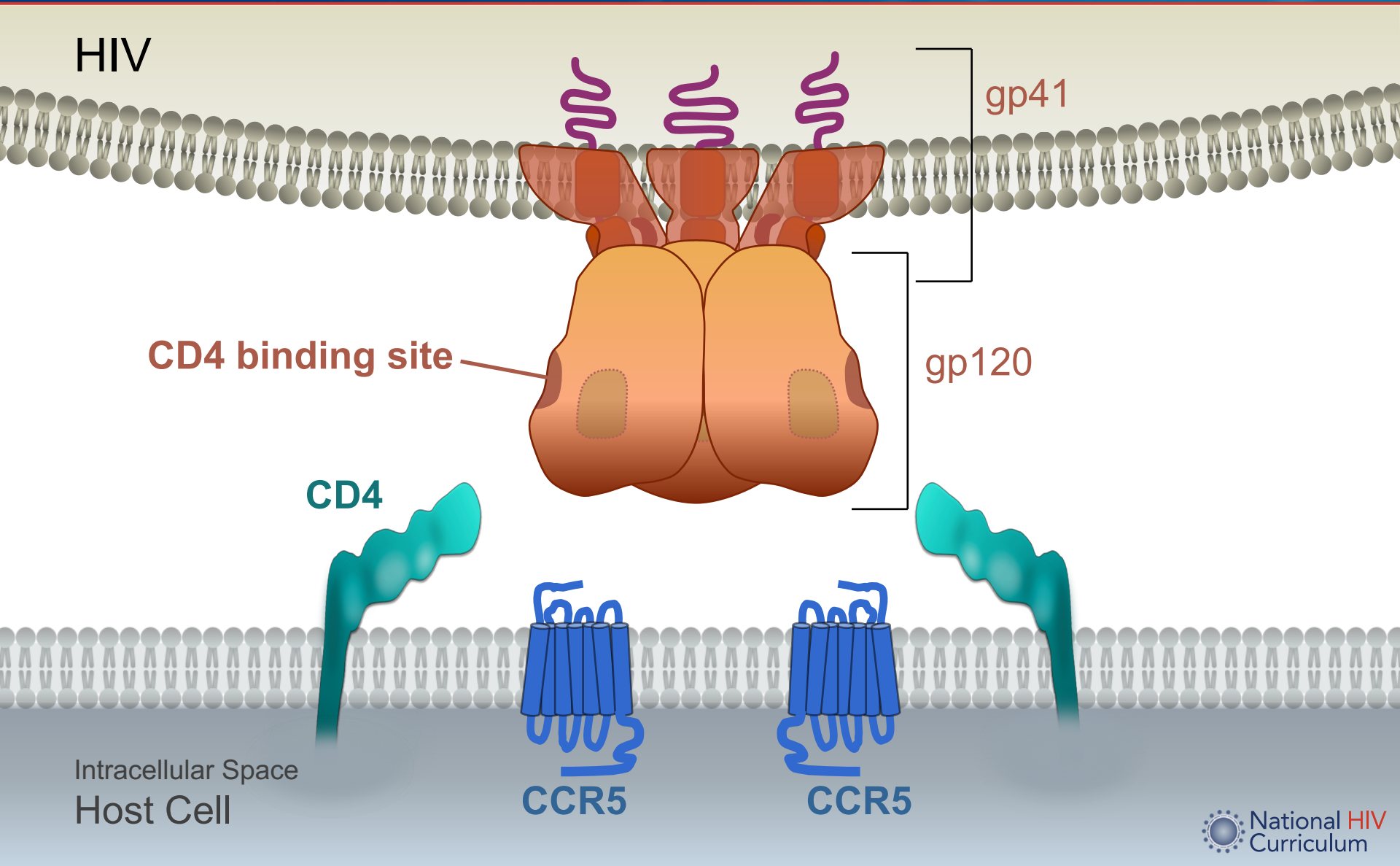
Ibalizumab (*Trogarzo*)

- **Indication**:
  - Heavily treatment-experienced adults with multidrug resistant HIV-1 failing their current antiretroviral regimen
- **Dosing (Intravenous)**:
  - Loading dose: 2,000 mg IV
  - Maintenance dose: 800 mg IV every 2 weeks
- **Contraindications**
  - None
- **Use During Pregnancy**
  - Insufficient data
- **Common Adverse Events (≥5%)**
  - Diarrhea (8%), dizziness (8%), nausea (5%), and rash (5%)

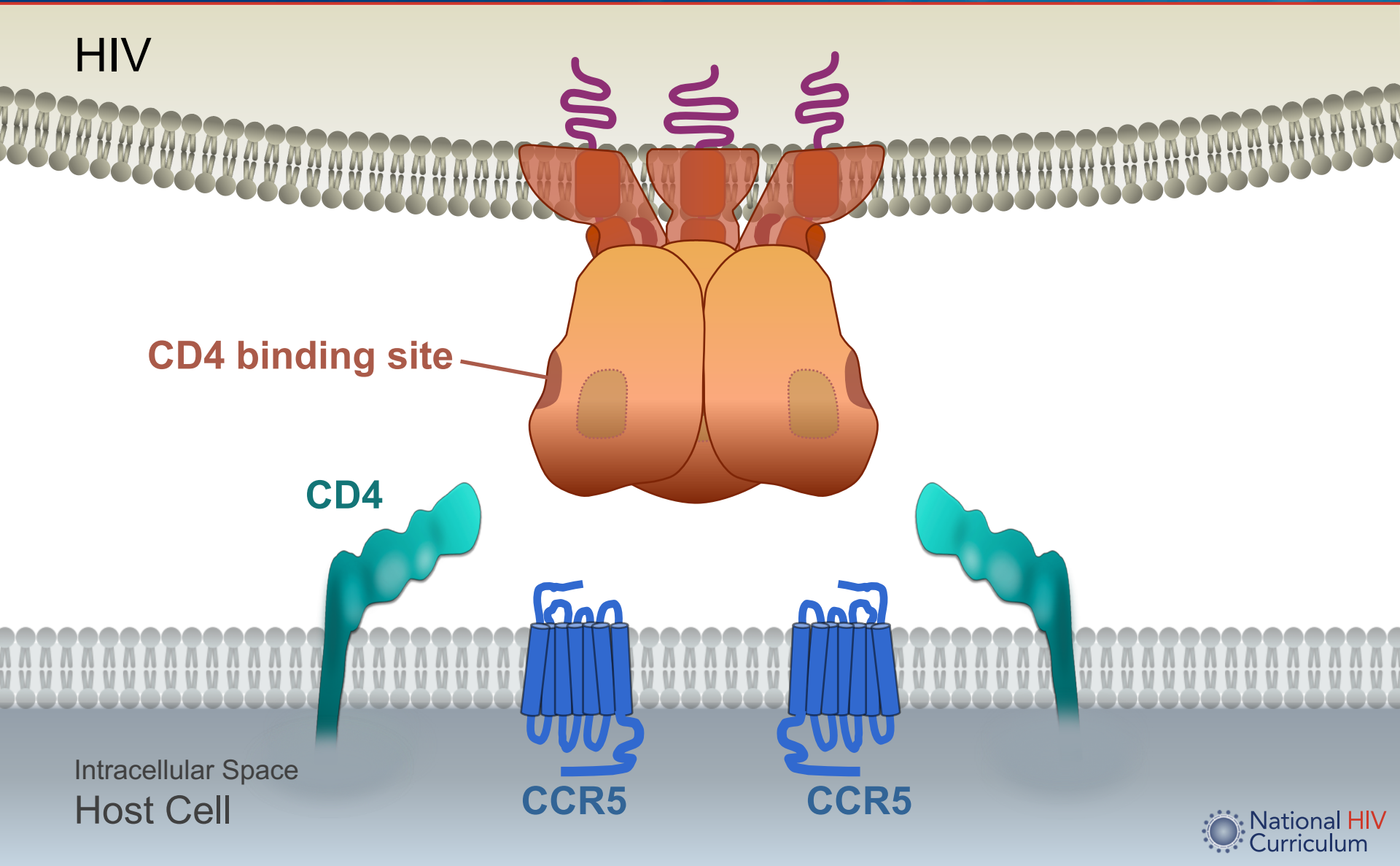
Host Receptors and HIV Entry



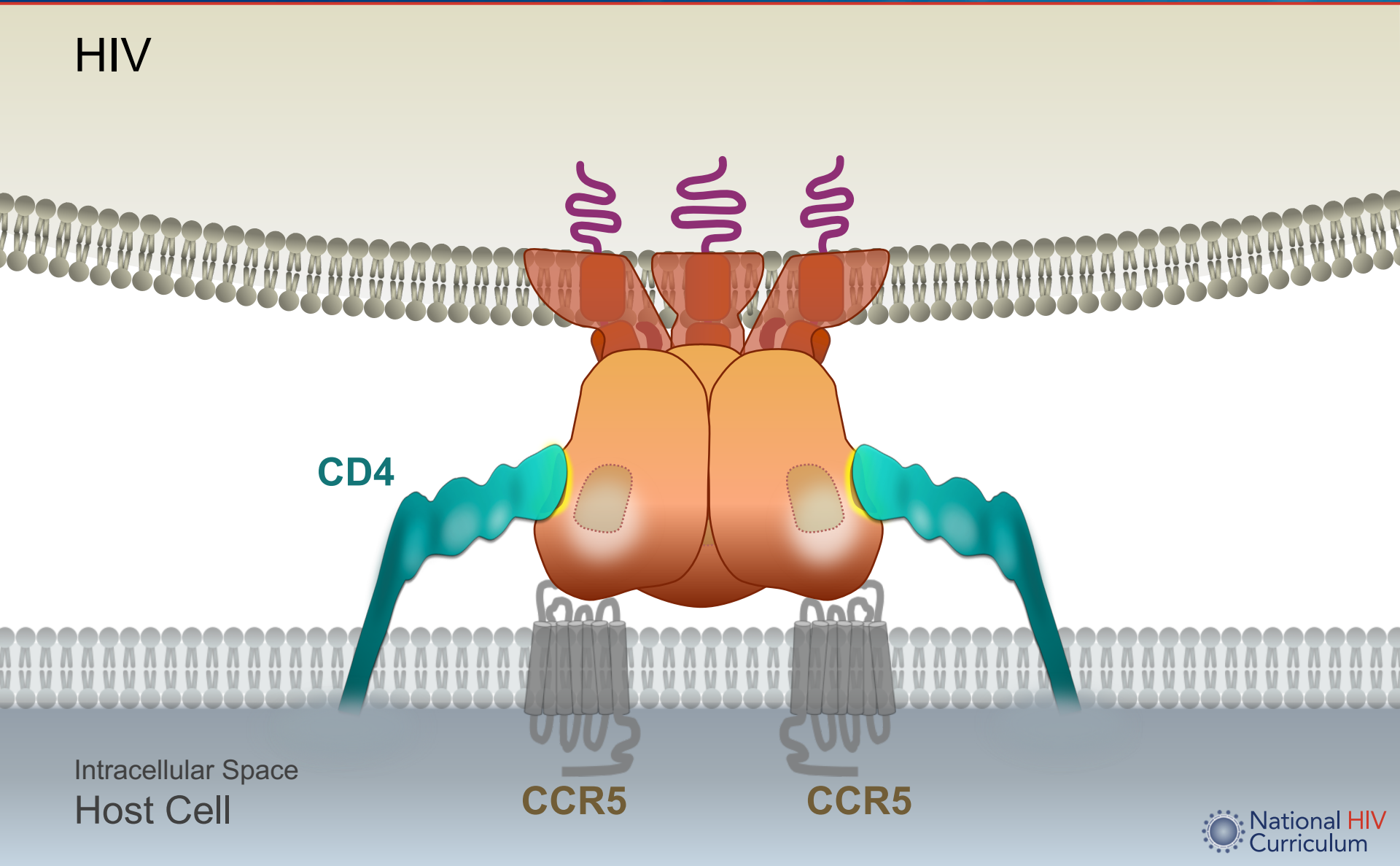
HIV Cell Entry: Binding to Host Cell CD4 Receptor



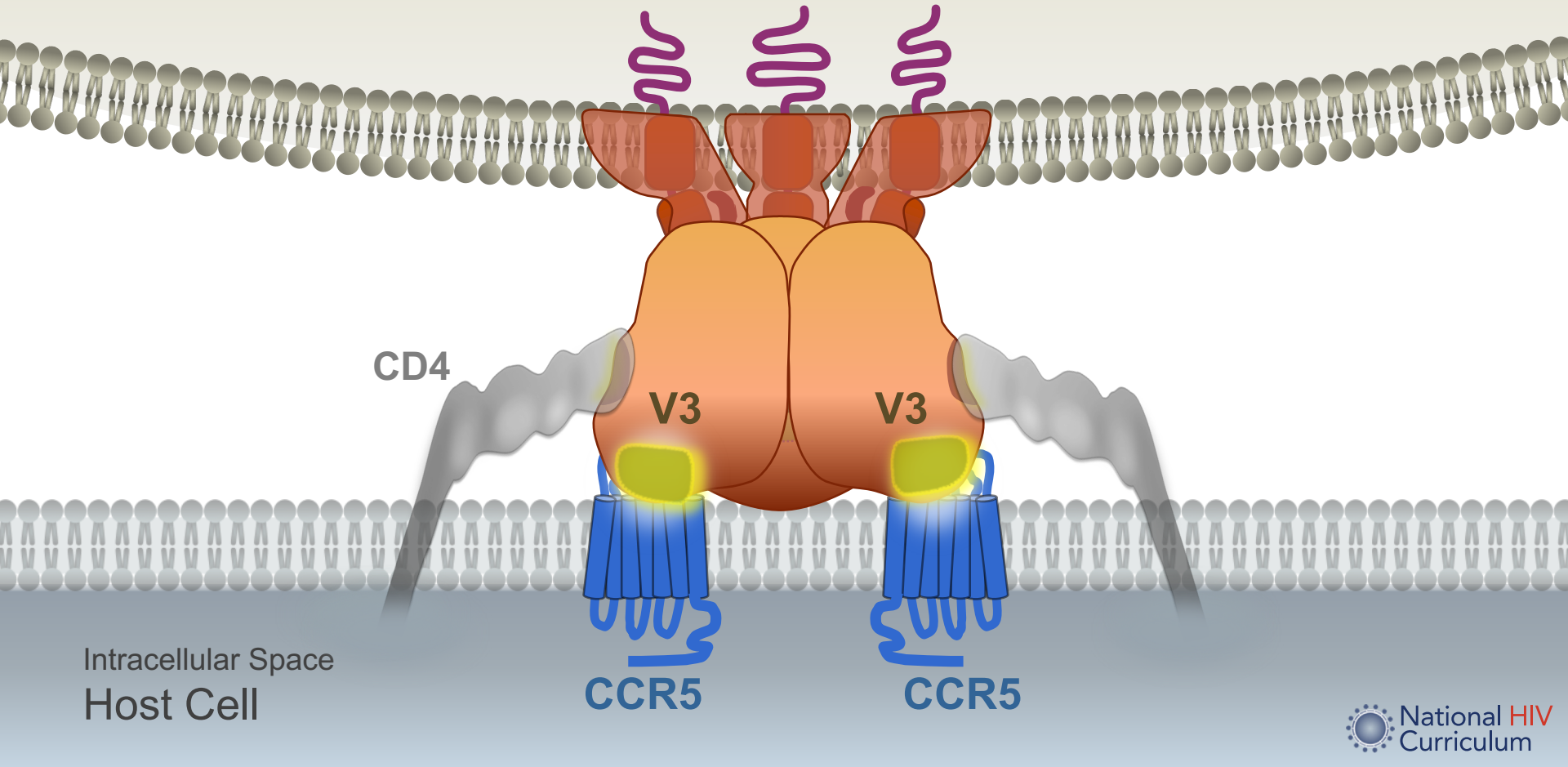
HIV Cell Entry: Binding to Host Cell CD4 Receptor



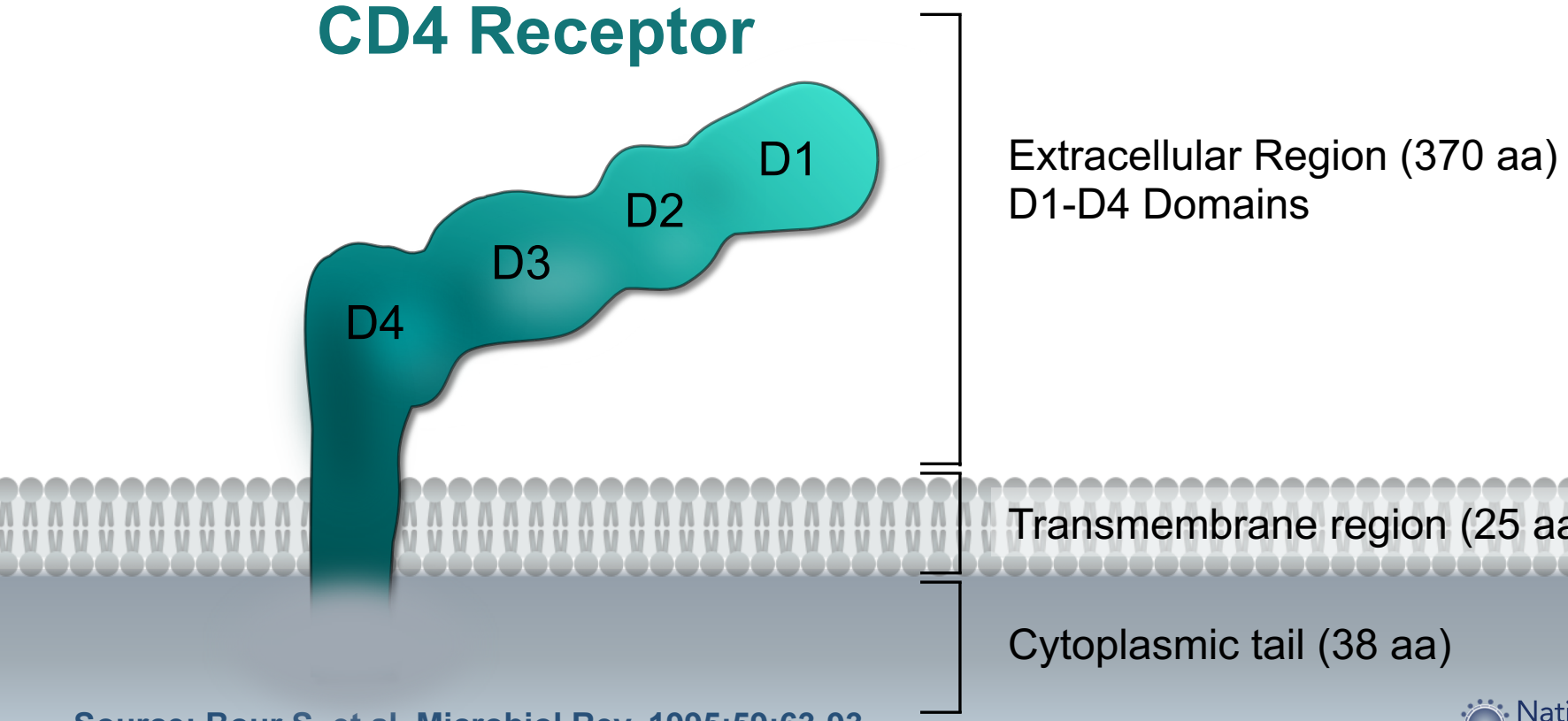
HIV Cell Entry
Binding to Host Cell CD4 Receptor



HIV Cell Entry
Binding to Host CCR5 Co-Receptor

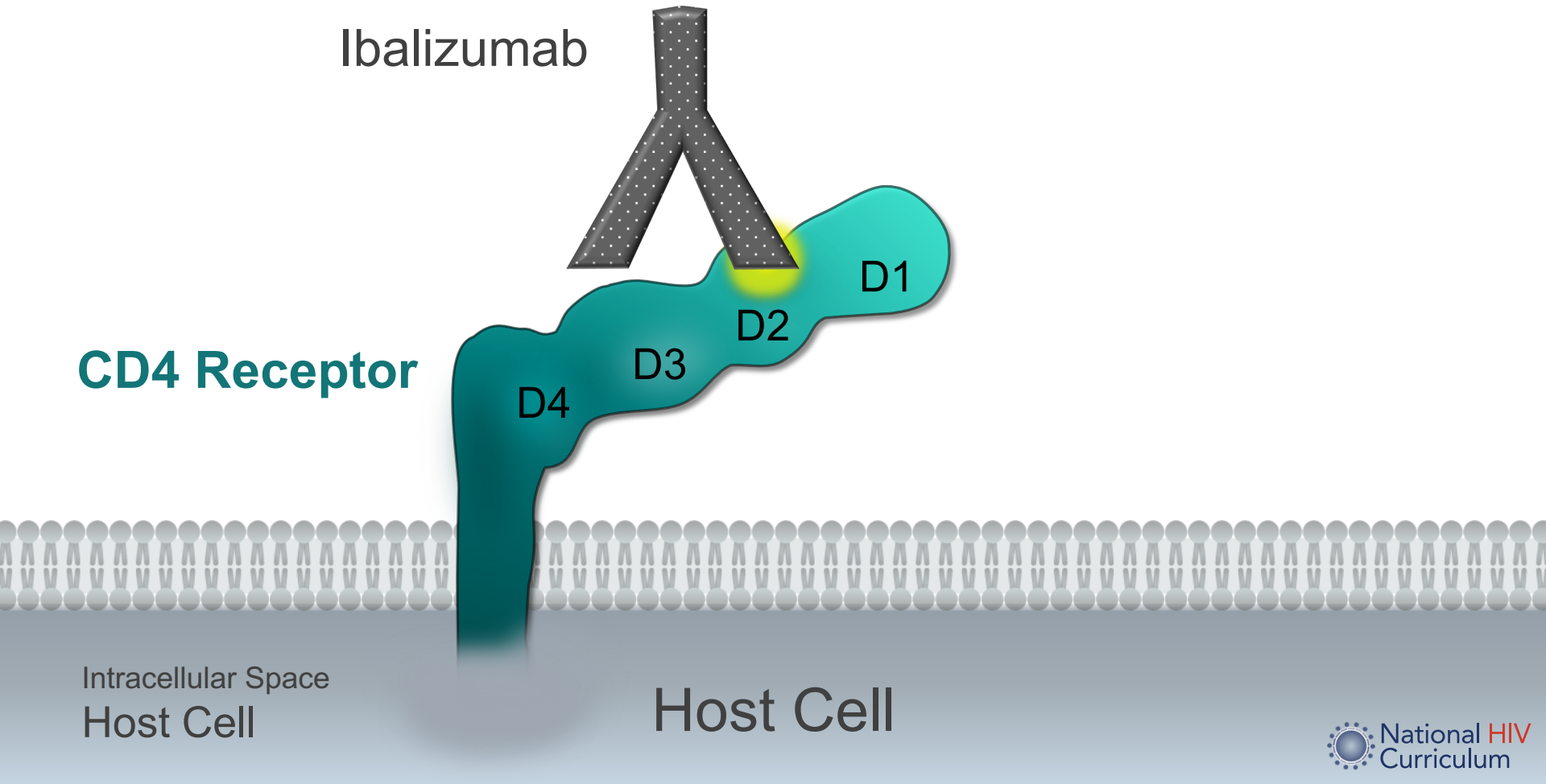


CD4 Receptor

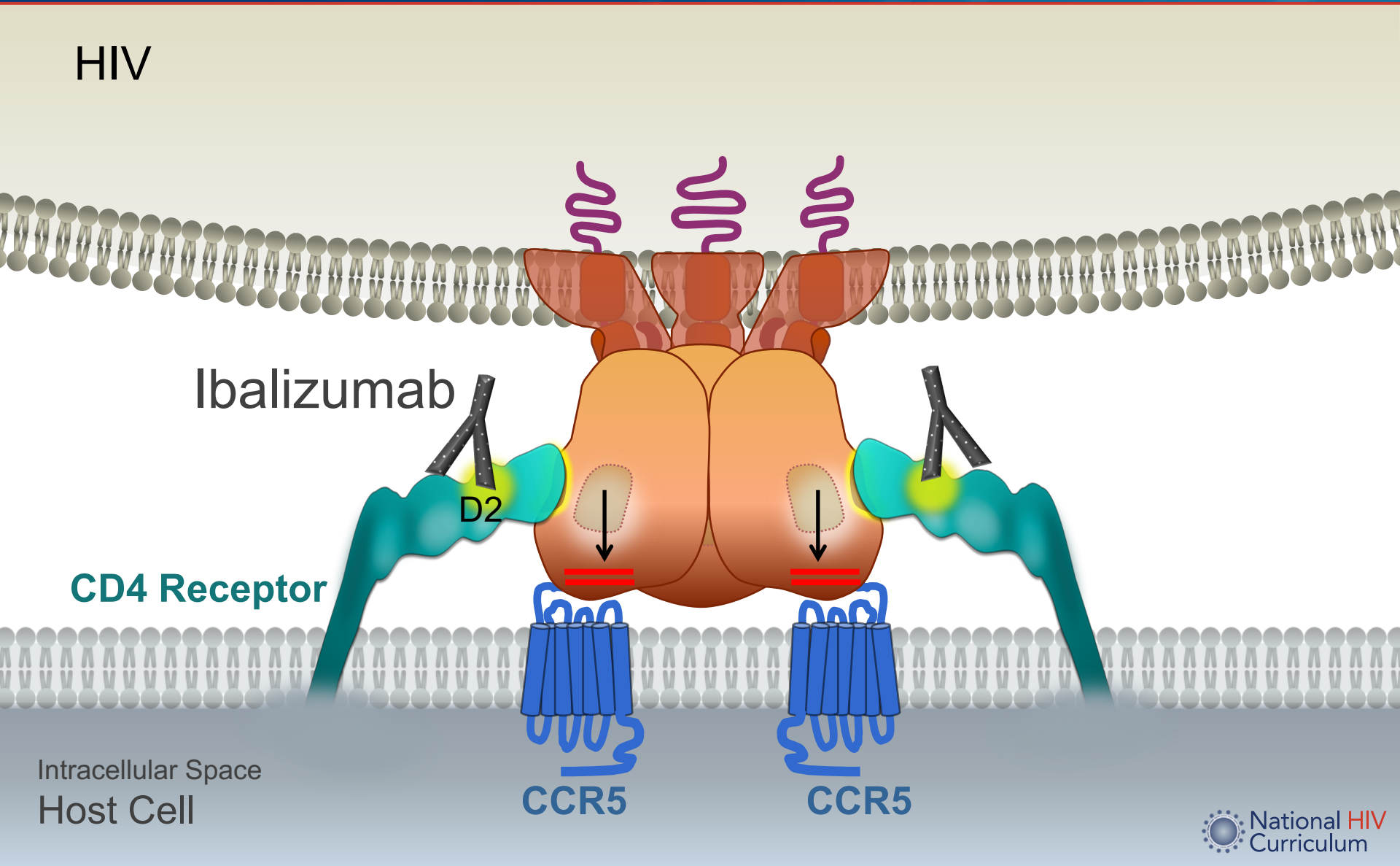


Source: Bour S, et al. Microbiol Rev. 1995:59:63-93.

CD4 Receptor and Ibalizumab Binding



Ibalizumab
CD4 Directed Post-Attachment HIV Inhibitor



Ibalizumab
Summary of Key Studies

- **Salvage Antiretroviral Therapy**
  - TMB-301: Ibalizumab plus OBR for Adults Failing ART

Ibalizumab

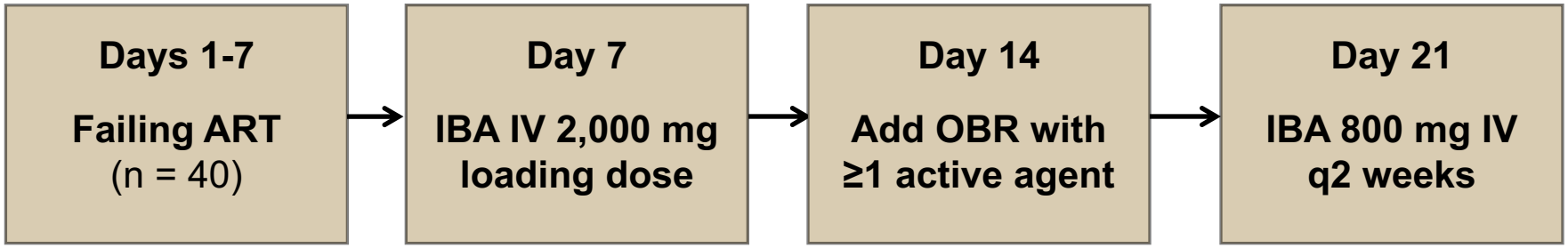
Ibalizumab for Antiretroviral Salvage

TMB-301: Study

Ibalizumab Added to OBR for Adults Failing ART
TMB-301: Study Design

TMB-301: Study Design

- **Study design:**
  - Single-arm, open label study of ibalizumab (IBA) added to optimized background therapy (OBR) for individuals failing ART
  - Primary endpoint: proportion achieving ≥0.5 $\log_{10}$ decrease in HIV RNA 7 days after initiating IBA therapy (day 14 of study)
  - Secondary endpoints: virologic outcomes, safety, and tolerability at 24 weeks
- **Inclusion Criteria:**
  - Adults with HIV, on ART for ≥6 months, HIV RNA >1,000 copies/mL, and ≥3 class drug resistance (but ≥1 remaining active drug)



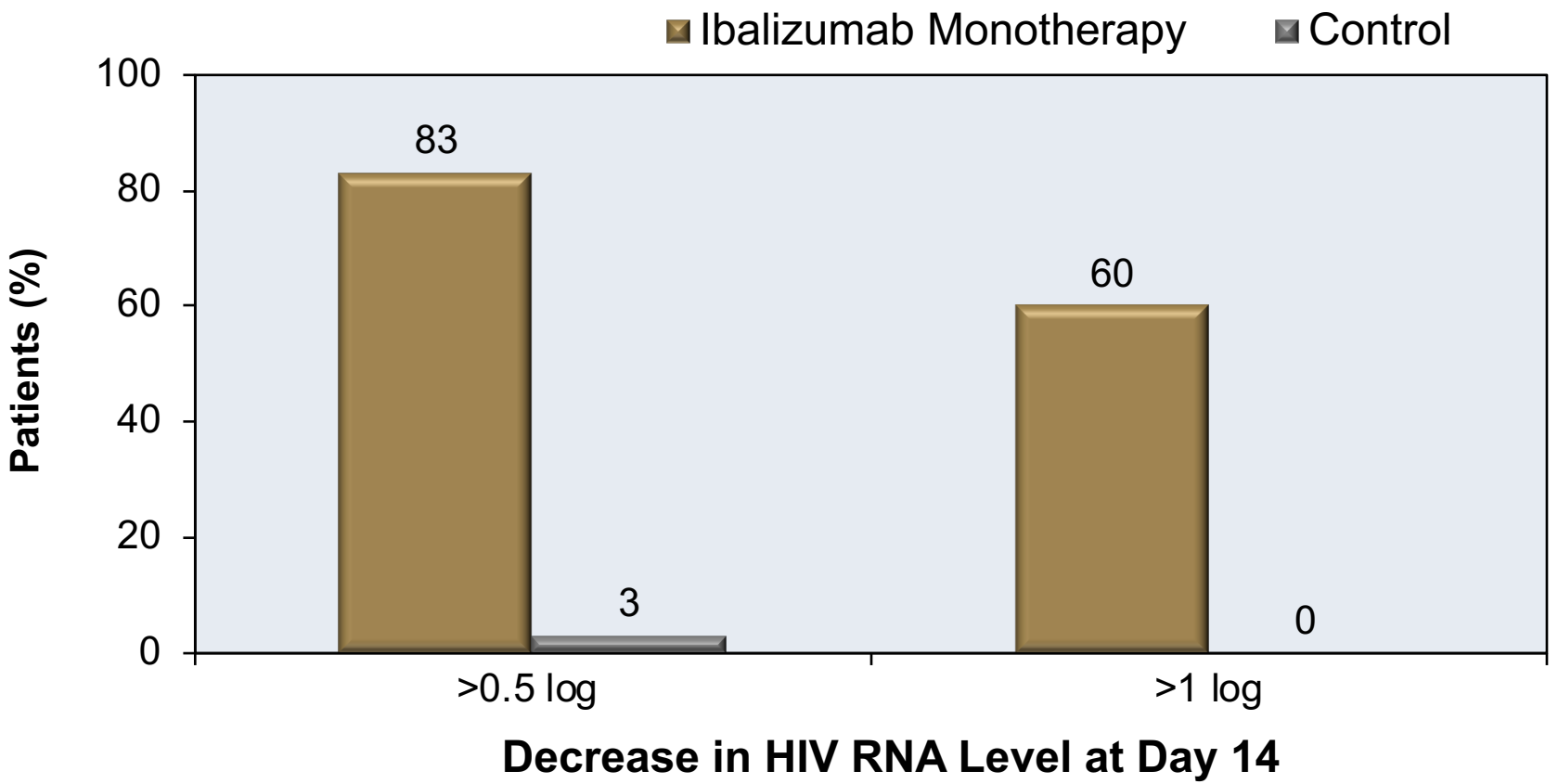
Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

Ibalizumab Added to OBR for Adults Failing ART TMB-301: Study Design

Baseline Characteristics of the 40 Participants in TMB-301	
Characteristic	**N = 40**
Median age (range)—years	53 (23-65)
Male	34 (85%)
Non-white	18 (45%)
Mean duration since HIV diagnosis—years	20±8
Mean CD4 count—cells/mm^3	150±182
Mean HIV RNA—copies/mL)	100,287
Participants with HIV RNA >100,000 copies/mL	7 (18%)

Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

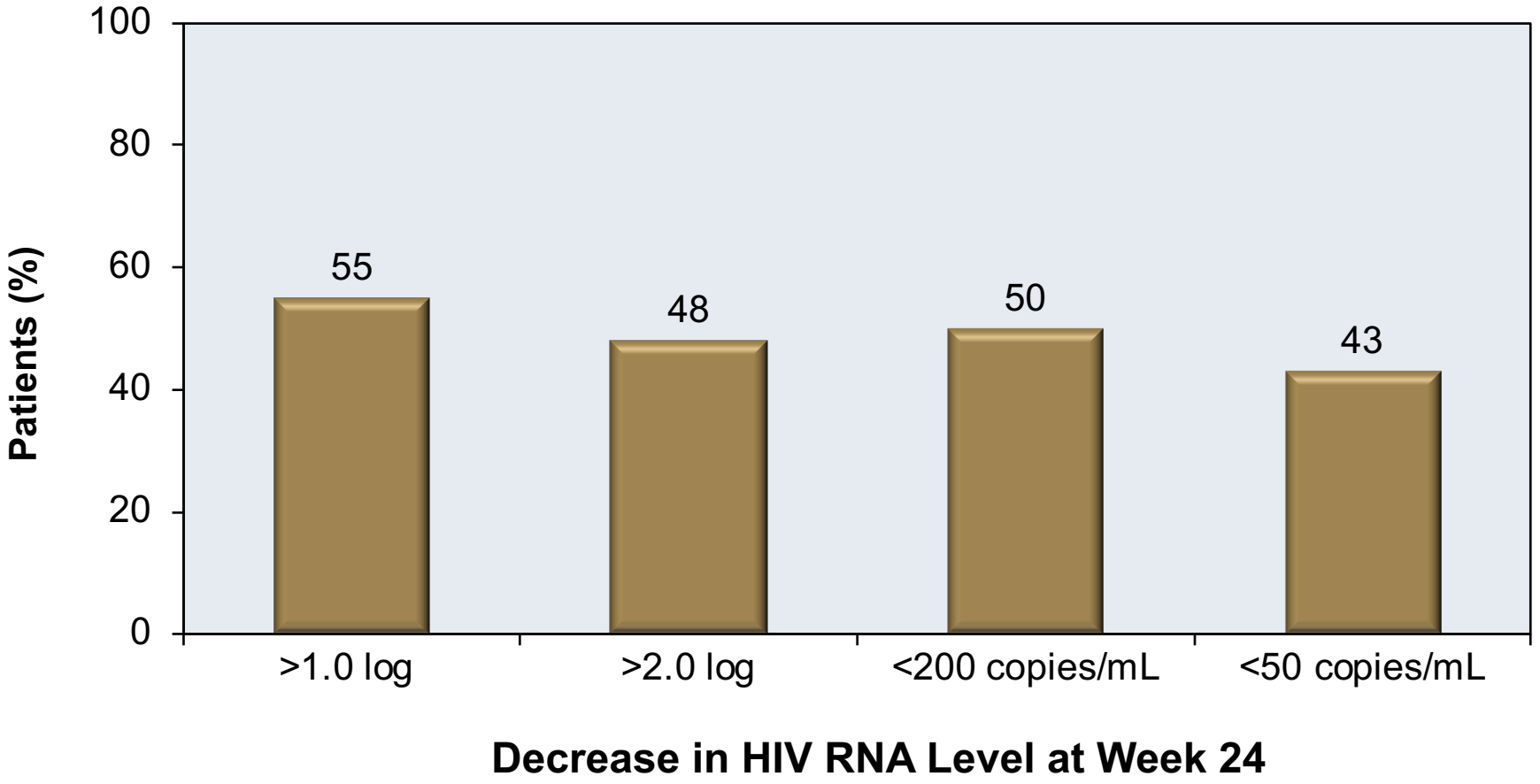
Ibalizumab Added to OBR for Adults Failing ART
TMB-301: Efficacy at Day 14



IBA Monotherapy = after 7 days of IBA added to failing ART (functional monotherapy)
Control = after 7 days of baseline failing ART

Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

Ibalizumab Added to OBR for Adults Failing ART
TMB-301: Efficacy at Week 24

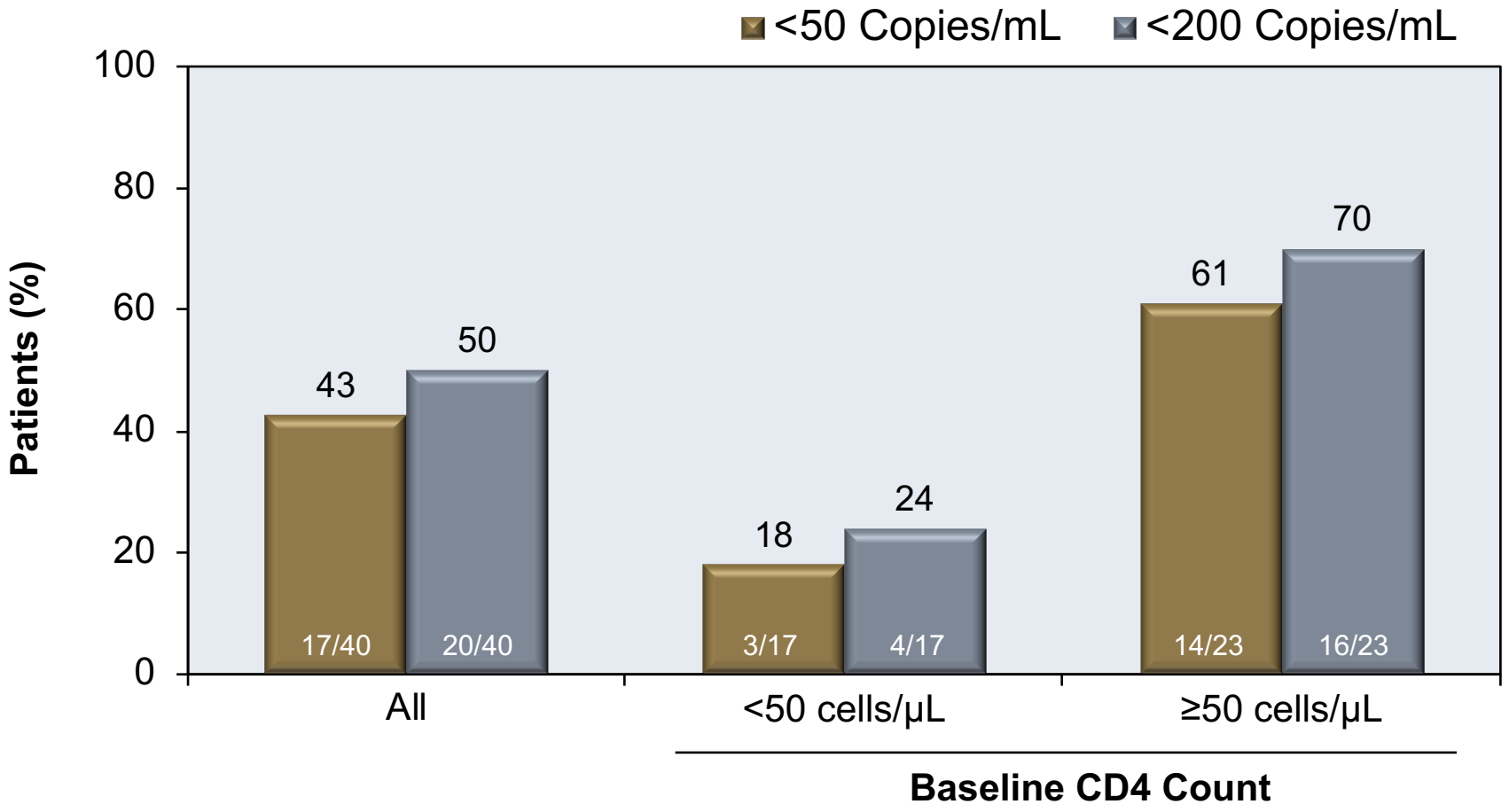


Optimized background regimen (OBR) added at day 14

Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

Ibalizumab Added to OBR for Adults Failing ART
TMB-301: Efficacy at Week 25, by Baseline CD4 Cell Count

Week 25 Virologic Response (Intention-to-Treat Analysis)



Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

Ibalizumab Added to OBR for Adults Failing ART
TMB-301: Efficacy at Week 24

Conclusions: “In patients with multidrug-resistant HIV-1 infection who had advanced disease and limited treatment options, ibalizumab had significant antiviral activity during a 25-week study. Evidence of the emergence of diminished ibalizumab susceptibility was observed in vitro in patients who had virologic failure.”

Source: Emu B, et al. N Engl J Med. 2018;379:645-54.

Acknowledgment

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