# Productivity Mostly Attributable to Data and Biological Specimens from the Cohorts

<table>
<thead>
<tr>
<th></th>
<th>SCOPE</th>
<th>UARTO</th>
<th>ISS Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subjects</td>
<td>1938</td>
<td>750</td>
<td>22,087</td>
</tr>
<tr>
<td>Location</td>
<td>San Francisco</td>
<td>Mbarara, Uganda</td>
<td>Mbarara, Uganda</td>
</tr>
<tr>
<td>Cohort type</td>
<td>Dynamic</td>
<td>Fixed</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Entry Criteria</td>
<td>Demand-driven collection of both prototypical &amp; rare clinical phenotypes</td>
<td>Consecutive ART starters at a prototypical municipal ART clinic</td>
<td>All patients at a prototypical municipal ART clinic</td>
</tr>
<tr>
<td>Paper-based measurements</td>
<td>Research-dedicated</td>
<td>Research-dedicated</td>
<td>During course of clinical care</td>
</tr>
<tr>
<td>Biologic specimens</td>
<td>Serum, plasma, PBMCs, saliva</td>
<td>Serum, plasma, PBMCs, saliva</td>
<td>--</td>
</tr>
<tr>
<td>Follow-up</td>
<td>4 months</td>
<td>4 months</td>
<td>Clinically-driven</td>
</tr>
<tr>
<td>Special procedures</td>
<td>Gut &amp; lymph node biopsies, apheresis</td>
<td>Real time adherence monitoring</td>
<td>Active tracking of drop outs</td>
</tr>
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</table>
San Francisco Cohorts

- **SCOPE:** Chronically HIV-infected patients
  - Enriched for “extreme phenotypes” (elite controllers, viremic non-progressors, immunologic non-responders, etc).
  - Key Faculty: Steve Deeks, Jeff Martin, Peter Hunt

Cohort/specimens/data now merged with . . .

- **OPTIONS (historic):** Recently HIV-infected patients
  - Boutique Cohorts: Transmission pairs, Highly exposed HIV-uninfected patients
  - Key Faculty: Rick Hecht, Chris Pilcher, Michael Busch

- **Treat Acute (new):** Acutely HIV-infected patients
  - “Getting to Zero” SF campaign, <100 days from estimated date of HIV infection, PreP failures, HIV-1 Ab neg/plasma VL positive
  - Key faculty: Sulggi Lee, Steve Deeks, Tim Henrich
Clinical Cohorts

- **WIHS**: Multi-center cohort of HIV-infected women and risk-matched HIV-negative controls
  - Currently: 3677 HIV+ women and 1305 HIV- women
  - Key Faculty: Phyllis Tien, Nadia Roan
  - Recent merge of WIHS with MACS (men) 2019
  - Now expansion to southern states
Clinical Cohorts

4,982

Seroprevalent: 3,677 (74%)

Seronegative: 1,305 (26%)

AIDS baseline 789 (21%)

AIDS-free baseline 2,888 (79%)

Seroconverter 27 (2%)

Seronegative 1,278 (98%)

AIDS baseline

AIDS 924 (32%)

AIDS-free 1,964 (68%)

AIDS 11 (41%)

AIDS-free 16 (59%)

Dead 482 (61%)

Dead 422 (46%)

Dead 296 (15%)

Dead 6 (55%)

Dead 5 (31%)

Dead 121 (9%)

* HIV & AIDS status as of the end of visit 47 (3/31/18). Deaths via NDI (through 12/31/14 for site 4 & 12/31/16 for all other sites) and through 3/31/18 via other reports

§ Three seroconverters found at death
Domestic Cohort Linkages

North American AIDS Cohort Collaboration on Research and Design

Sites
- Galveston, TX
- Greensboro, NC
- Portland, OR
- Providence, RI
- Rochester, NY
- Sacramento, CA
- San Diego, CA
- San Juan, PR
- San Francisco, CA
- San Lerado, CA
- San Rafael, CA
- San Jose, CA
- Seattle, WA
- St. Louis, MO
- Stanford, CA
- Stony Brook, NY
- Tampa, FL
- Toronto, ON
- Washington, DC

Canadian Sites
- British Columbia: Vancouver
- Quebec: Montreal
- Southern Alberta

CFAR Center for AIDS Research
University of California San Francisco
Gladstone Institute of Virology & Immunology
Other Research Networks

• ACTG (AIDS Clinical Trials Group)
  • Diane Havlir (TB TSG Vice Chair)
  • Peter Hunt (Inflammation/End-organ Disease Chair)

• CNICS (CFAR Network of Integrated Clinical Systems)
  • Linked electronic medical records across multiple HIV clinics
  • Specimens available to link biomarkers to rare clinical outcomes
  • Key Faculty: Steve Deeks, Peter Hunt, Jeff Martin
Innovation: Linkage to CNICS Specimen Repository

- March 25, 1987 to 2019
- 8 contributing sites
  - CWRU
  - JHU
  - UCSD
  - UNC
  - Fenway
  - UAB
  - UCSF
  - UW
- 1,043,374 aliquots
  - from 139,148 unique timepoints
    -- from 18,188 HIV-infected patients
# Core Metrics: 2012-2013

<table>
<thead>
<tr>
<th>Item</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projects</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>144</td>
</tr>
<tr>
<td>International</td>
<td>33</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>205</td>
</tr>
<tr>
<td>UCSF CFAR</td>
<td>69</td>
</tr>
<tr>
<td>Other CFARs</td>
<td>57</td>
</tr>
<tr>
<td>Non-CFAR</td>
<td>79</td>
</tr>
<tr>
<td>Early Stage Investigators</td>
<td>38</td>
</tr>
<tr>
<td><strong>Publications</strong></td>
<td>60</td>
</tr>
<tr>
<td><strong>Conference Presentations</strong></td>
<td>58</td>
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* including submitted
Real time inventory

<table>
<thead>
<tr>
<th>Participant Classification</th>
<th>Number of Participants with at least 1 applicable timepoint</th>
<th>Number of Timepoints with at least 1 available aliquot</th>
<th>Total Number of Available Aliquots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elite Controller--Confirmed</td>
<td>60</td>
<td>448</td>
<td>4637</td>
</tr>
<tr>
<td>Viremic Controller--Confirmed</td>
<td>116</td>
<td>734</td>
<td>8687</td>
</tr>
<tr>
<td>&quot;Generic&quot; Controller--Confirmed</td>
<td>168</td>
<td>1425</td>
<td>16122</td>
</tr>
<tr>
<td>Non-Controller</td>
<td>279</td>
<td>844</td>
<td>8793</td>
</tr>
<tr>
<td>HAART Suppressed</td>
<td>622</td>
<td>4038</td>
<td>47298</td>
</tr>
<tr>
<td>Elite Controller--Awaiting Further Observation</td>
<td>35</td>
<td>64</td>
<td>700</td>
</tr>
<tr>
<td>Viremic Controller--Awaiting Further Observation</td>
<td>87</td>
<td>172</td>
<td>2130</td>
</tr>
<tr>
<td>&quot;Generic&quot; Controller--Awaiting Further Observation</td>
<td>109</td>
<td>227</td>
<td>2696</td>
</tr>
</tbody>
</table>

Rapid distribution

**2012:** 48 separate specimen shipments to investigators

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>No. Unique Timepoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasma</td>
<td>2080</td>
</tr>
<tr>
<td>Serum</td>
<td>450</td>
</tr>
<tr>
<td>Viable PBMC</td>
<td>947</td>
</tr>
<tr>
<td>Non-viable PBMC</td>
<td>768</td>
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