Surveillance Case Definition of Stage-0 HIV Infection

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Background (1)

In the current surveillance case definition for HIV infection, the stage depends on CD4 test results or diagnosis of AIDS-indicative opportunistic illness (OI) in persons aged >12 years.

<table>
<thead>
<tr>
<th>Stage</th>
<th>CD4 T-lymphocyte test results*</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Cells/µL</td>
</tr>
<tr>
<td>1</td>
<td>≥500</td>
</tr>
<tr>
<td>2</td>
<td>200—499</td>
</tr>
<tr>
<td>3†</td>
<td>&lt;200</td>
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*If CD4 count or percent indicate different stages, the stage is determined by whichever indicates the more advanced stage.
†Stage is also 3 if OI is diagnosed, regardless of CD4 test result.
Background (2)

Staging system cannot apply to early HIV infection if stage depends only on CD4 test results or OIs, because low CD4 levels and OIs can occur in early HIV infection, which could lead to confusion between early HIV infection and stage 3.

Based on: Pilcher CD, Christopoulos KA, Golden M. Public Health Rationale for Rapid Nucleic Acid or p24 Antigen Tests for HIV. The Journal of Infectious Diseases 2010; 201(S1):S7–S17.
Stage 0 is diagnosis within 6 months after negative/indeterminate HIV test results

This definition of stage 0

- Enables early HIV infection to be included in staging system independent of CD4 test results and OI diagnoses

- Brings attention to opportunity for prevention of transmission to other persons
  - Includes period of high viral load and high infectivity that should have priority for prevention
  - Promotes early treatment
Stage 0 may be recognized based on:

1. **Testing history**: Negative/indeterminate conclusion of test results in past 180 days, and positive conclusion of test results now (may include non-acute infections) or

2. **HIV testing algorithm** with conclusion of acute infection, such as

   - Positive initial serologic test (e.g., 4th generation combination antigen/antibody test)
   - Negative or indeterminate supplemental antibody test (e.g., HIV-1/HIV-2 type-differentiating immunoassay),
   - Concluding positive HIV-1 NAT
   - Negative initial serologic immunoassay
   - Concluding positive HIV-1 NAT
Exception

HIV infection is not Stage 0 if **negative** or **indeterminate** HIV test used as criterion for earliness was preceded by >60 days by clinical or laboratory evidence of earlier onset of HIV infection.
Laboratories Should Report Stage 0 Acute Infection to HIV Surveillance and Prevention Programs by:

- **Routine** reporting of all test results in the algorithm (including preliminary results of initial tests and negative or indeterminate antibody test results preceding the positive NAT), enabling health department to recognize acute infection and/or

- **Special** notification (e.g., by phone) of finding acute infection
Thank you!

For more information please contact Centers for Disease Control and Prevention

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Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: http://www.cdc.gov

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