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**Date:** January 7, 2013

**To:** Transplant Programs, Infectious Diseases Physicians, Laboratory Directors and Managers

**From:** Provincial Laboratory for Public Health (ProvLab)

**Re:** Quantitative Assay for Adenovirus Polymerase Chain Reaction (PCR) on Plasma

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**Key Messages:**

- **Effective January 28, 2013**, Adenovirus PCR testing will be performed on plasma using a quantitative assay (RealStar Adeno PCR, Altona Diagnostics). Results will be reported in log copies/mL.
- The analytic sensitivity of the assay, as determined on adenovirus serotype 2, is approximately 2.6 log copies/mL of plasma (400 copies/mL of plasma), with a linear range of at least 7 logs. Although there is currently no clear viral load cut-off that will predict disease or outcome, a quantitative assay is useful to follow the viral kinetics over time and assess the response to therapy.
- PCR testing can also be done on tissue biopsies, but the result will be reported only qualitatively (ie. "adenovirus detected" or "adenovirus not detected").

**Background:**

Adenoviruses are increasingly recognized as an opportunistic virus in immunocompromised patients, capable of causing diseases such as pneumonitis, hepatitis, hemorrhagic cystitis, colitis, pancreatitis, meningoencephalitis, or disseminated disease that involves 2 or more organs.

These diseases are frequently accompanied by viremia, detectable by PCR. In contrast, viremia in the immunocompetent patient is unusual. Consequently, testing for the presence of adenoviruses in the plasma of immunocompromised patients is a valuable diagnostic assay, although asymptomatic viremia in these patients has been shown to occur as well. ProvLab has been providing, by request to the Virologist-on-Call (VOC), PCR detection on plasma samples.

**Action Required:**

Requests for adenovirus PCR on plasma or tissue samples must be approved by calling the VOC at:

- Edmonton Site - Ph: 780-407-7121 (ask for Virologist-on-Call)
- Calgary Site - Ph: 403-944-1200 (ask for Virologist-on-Call)

**Sample Collection and Handling Requirements:**

- Collect one EDTA blood sample (at least 0.2 mL of plasma required).
- Tissue samples must be submitted in a sterile container without additives.

**For additional questions contact:**

- Dr. Raymond Tellier, Program Leader, Transplant Program, ProvLab at: 403-944-2724 or Email: [Raymond.Tellier@albertahealthservices.ca](mailto:Raymond.Tellier@albertahealthservices.ca)

This bulletin has been reviewed and approved by:  
Dr. Graham Tipples, Medical/Scientific Director, Provincial Laboratory for Public Health (ProvLab)