

Date: April 17, 2014

To: South Zone West: Physicians, Nursing Unit Managers, Laboratory Staff

From: Cytology Department, Chinook Regional Hospital

Re: Collection of Body Fluids for Cytology Testing

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Key Messages:

- A body fluid sample that is collected for Cytology testing can often yield a small number of diagnostic cells.
- These samples can be very bloody and/or contain a high concentration of inflammatory changes. These components may obscure the diagnostic abnormal cells.
- Various studies have been done on the volume of body fluid submitted for testing. A minimum volume of sample for testing has been suggested.
- To mitigate the influence of sample size on diagnostic adequacy, collect a minimum volume of 50 mL of body fluid, where feasible.

Why this is important:

- Submission of a body fluid sample that is less than 50 mL may increase the risk of an indeterminate or false negative diagnosis.

Action Required:

- Collect a minimum volume of 50 mL when submitting to Cytology for testing, where feasible.

References:

1. "An investigation of adequate volume for the diagnosis of malignancy in pleural fluids" / *Cytopathology*, Volume 22, Issue 3, pages 179–184, June 2011 / S. C. Thomas, L. R. R. Davidson and M. E. McKean
2. "[475] A Minimum Volume of 50 ml is Necessary to Ensure That a Pleural Effusion Is Benign: A Retrospective Review of 2,536 Cases". Lisa Rooper, Syed Z Ali, Matthew T Olson. The Johns Hopkins Hospital, Baltimore, MD.
3. "A prospective study of the volume of pleural fluid required for accurate diagnosis of malignant pleural effusion." / *Chest*. 2009 Apr;135(4):999-1001. doi: 10.1378/chest.08-2002. Epub 2008 Nov 18./Abouzgheib W¹, Barter T, Dagher H, Pratter M, Klump W.

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This bulletin has been reviewed and approved by:

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