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TITLE: Integration of Diagnostic and Interventional MRI for the Study of Persistent Prostate Cancer after External Beam Radiotherapy

PRINCIPAL INVESTIGATOR: Cynthia Ménard, M.D.

CONTRACTING ORGANIZATION: University Health Network
Toronto, Canada, M5G 1Z5

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14. ABSTRACT: This study involves the technical development and clinical testing of a novel technique for magnetic resonance imaging (MRI) guided prostate biopsy in a 1.5T horizontal bore scanner using a dedicated interventional table. We primarily hypothesize that the integration of diagnostic and interventional MRI enables needle biopsy targeting to foci of tumor recurrence after radiotherapy, and will enable a determination of the diagnostic accuracy of MRI in mapping sub-sites of tumor recurrence after radiotherapy. Major finding to date: This clinical study received ethics approval from USAMRMC approval on October 13 2006, and therefore no research was conducted between September 2005 and September 2006. Funds were only released after HSRRB aproval, and received in September 2006.					
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INTRODUCTION:

This study involves the technical development and clinical testing of a novel technique for magnetic resonance imaging (MRI) guided prostate biopsy in a 1.5T horizontal bore scanner using a dedicated interventional table. We primarily hypothesize that the integration of diagnostic and interventional MRI enables needle biopsy targeting to foci of tumor recurrence after radiotherapy, and will enable a determination of the diagnostic accuracy of MRI in mapping sub-sites of tumor recurrence after radiotherapy.

This study will enroll up to 50 patients with suspicion of locally recurrent prostate cancer after external beam radiotherapy in a pilot, three-stage trial design. The first stage will include technical development and optimization of the imaging technique. The second stage will include technical development of optimization of the biopsy technique, followed by a clinical evaluation stage. This preliminary data will be critical for the judicious conduct of a subsequent phase I-II trial.

BODY:

USAMRCMC approval for the conduct of this study was only obtained on October 13 2006, therefore no research has been conducted between September 2005 and September 2006. Funds were only released after approval, and received Sep 2006.

KEY RESEARCH ACCOMPLISHMENTS: n/a

REPORTABLE OUTCOMES: n/a

CONCLUSION: The statement of work has been delayed 1 year for regulatory approval.

REFERENCES: n/a

APPENDICES: n/a

SUPPORTING DATA: n/a