

CANADIAN **PROSTATE CANCER**
RESEARCH INITIATIVE

INITIATIVE CANADIENNE DE RECHERCHE
SUR **LE CANCER DE LA PROSTATE**

Canadian Prostate Cancer Research Initiative

Us Too! Brampton
Nov 2006



National
Cancer Institute
of Canada

Institut national
du cancer
du Canada



Canadian
Cancer
Society

Société
canadienne
du cancer

CPCRI

- Alliance formed in 1997 of
 - Health Canada
 - NCIC
 - CCS
 - Canadian Prostate Cancer Network (CPCN)
 - CIHR
 - Purpose
 - To Stimulate and Support **new** work in prostate cancer research.
 - Clinical
 - Basic
 - Translational
 - Health Services
 - Quality of Life
 - Epidemiology
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History – 1999 Onwards

- 3 Key “Gaps” identified that CPCRI would try to address
 - Funding for “High-Risk” Innovative Research
 - Boost Capacity *in Canada*
 - Funding for Collaborative Research
 - Boost Research Capacity
 - Informatics
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Funding for “High-Risk” Innovative Research

- Idea Grants
 - Introduced in 2002
 - \$50,000 per Grant
 - Test new ideas outside normal funding mechanisms - speculative
 - Small scale pilot studies
 - Investigation of concepts
 - Attract new investigators into field
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Funding for “High-Risk” Innovative Research

■ Idea Grants

- 7 Competitions May 2002 – May 2005
 - Total applications: 176
 - Total Funded : 52 (\$2,600,000)
 - Many excellent proposals not funded
 - Very good feedback from investigators
 - Some Success stories
 - Branding of CPCRI
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Funding for “High-Risk” Innovative Research

■ Idea Grant

- A ribozyme based strategy to identify genes whose inactivation is selectively lethal for p53 null prostate cancer cells
 - Principal Investigator: Gerardo Ferbeyre - Univ of Montreal

■ Led to:

- Operating Grant from PC Foundation 2003
 - Publication in Cancer Research (High Impact Journal) 2005 suggesting a *novel* mechanism by which treatment could kill prostate cancer cells.
 - RNA silencing of checkpoint regulators sensitizes p53-defective prostate cancer cells to chemotherapy while sparing normal cells. Cancer Res. 2005 Apr 1;65(7):2872-81.
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Funding for “High-Risk” Innovative Research

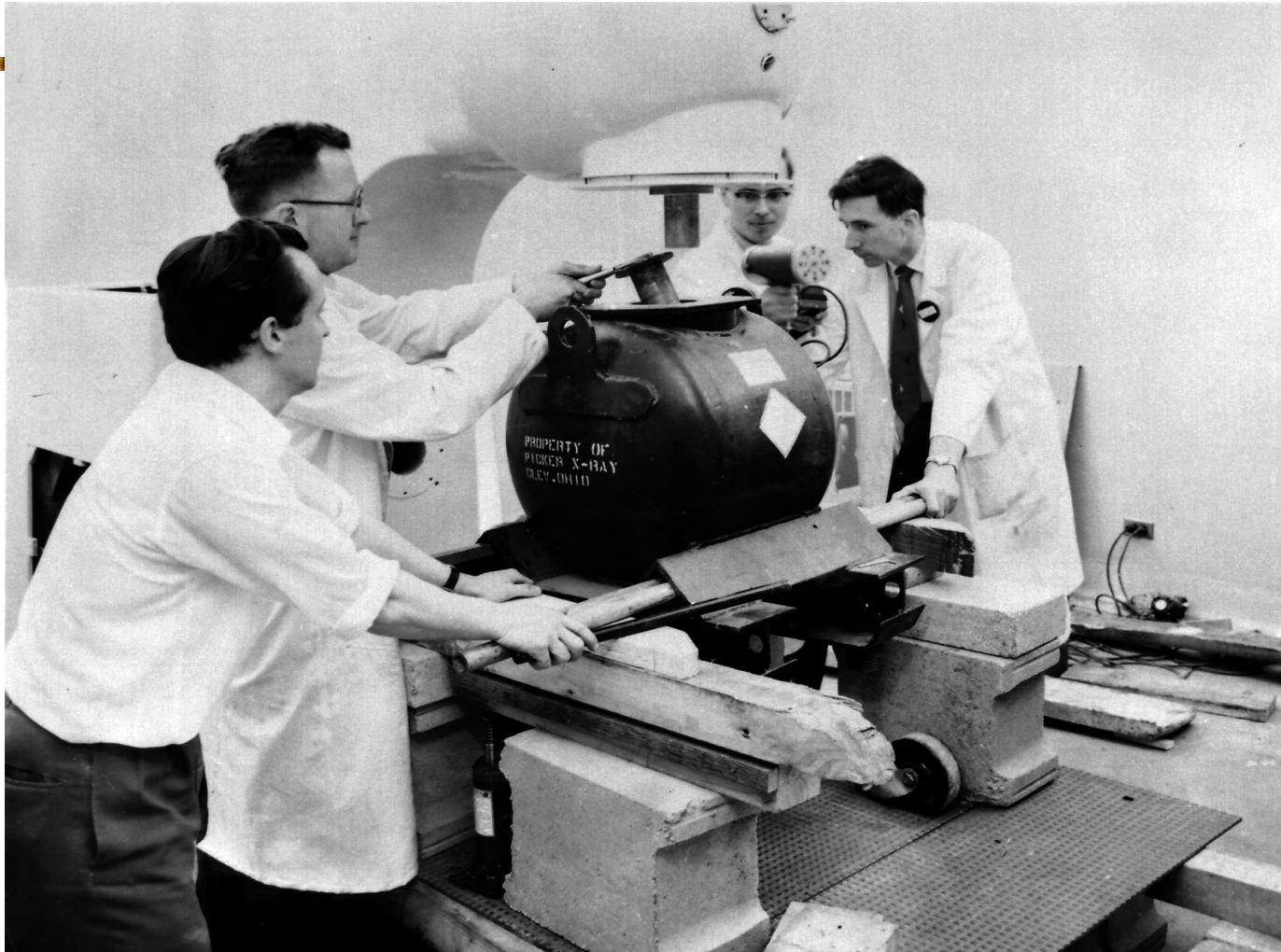
■ Idea Grants

- A study of a bowel regimen to reduce intra-fraction prostate motion
- Dose-volume histogram analysis of late toxicity following high-dose radiation therapy for prostate cancer
 - Principal Investigator: Charles Catton, Princess Margaret Hospital

■ Led to:

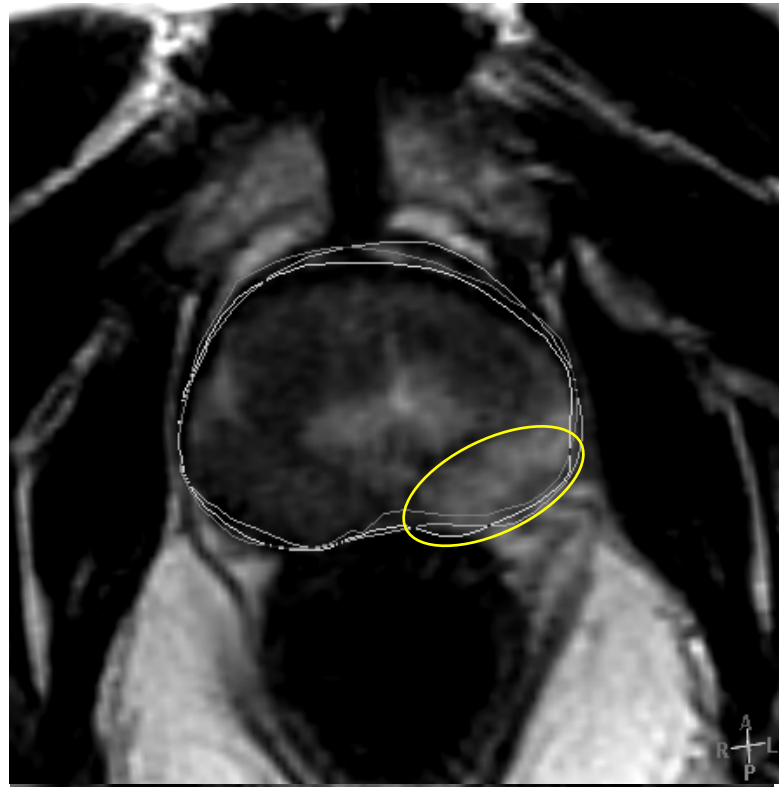
- CIHR Grant - \$2,200,000
 - A Randomized Trial of a Shorter Radiation Fractionation Schedule for the Treatment of Localized Prostate Cancer
 - Collaborative Grant Toronto, Hamilton, Montreal, Edmonton, Vancouver.
 - Opening to accrual Apr 17th 2006
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Original Cobalt Unit in London Ontario



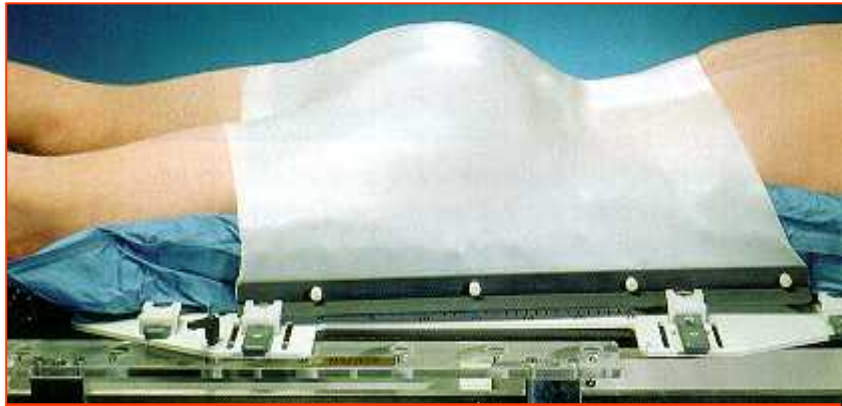
Prostate Cancer – Target Definition

- CT vs MRI





Supine position with Vac-Loc device



Prone position with Hip-fix device

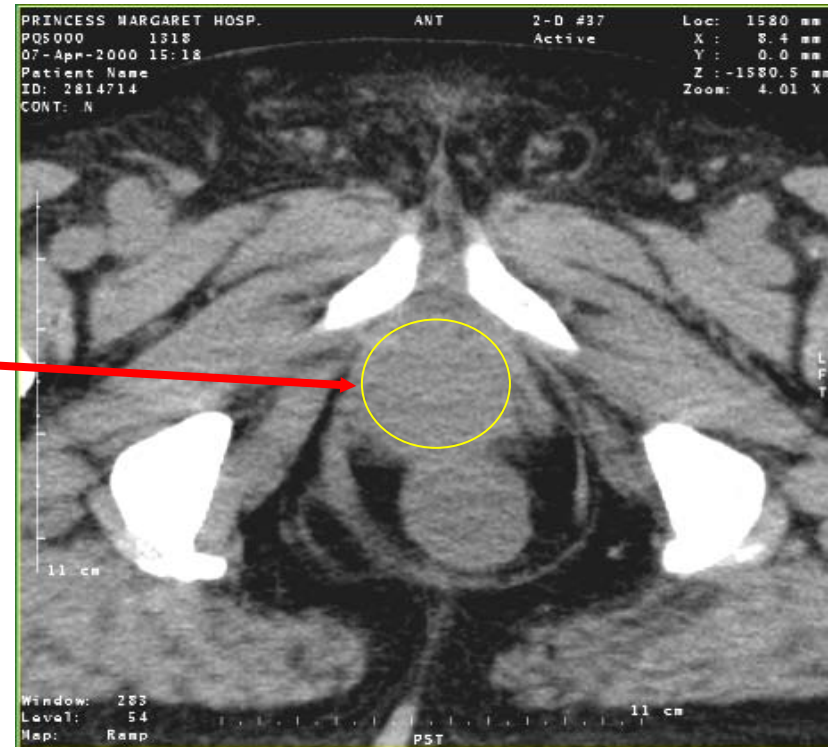
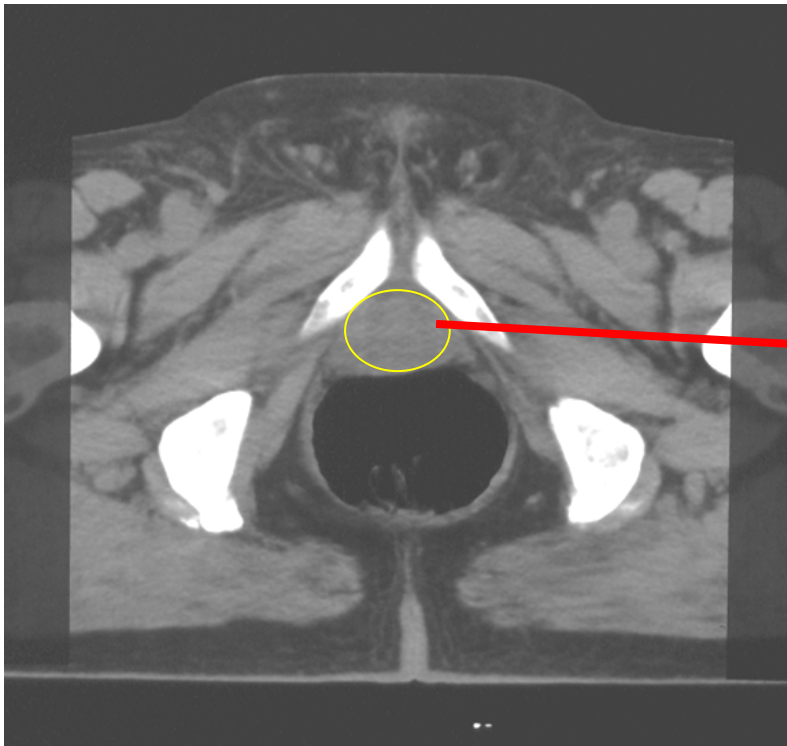
Supine positioning in VacLoc superior in terms of

- Cost
- Therapist time and convenience
- Patient comfort and satisfaction
- Rectal volume for 50% isodose significantly less
- Significantly smaller organ motion in supine position

Bayley et al Radiother Oncol
Jan 2004



Soft tissue structures move independently of bones



Same patient on different days

Prostate motion

Rectal gas

Bladder filling

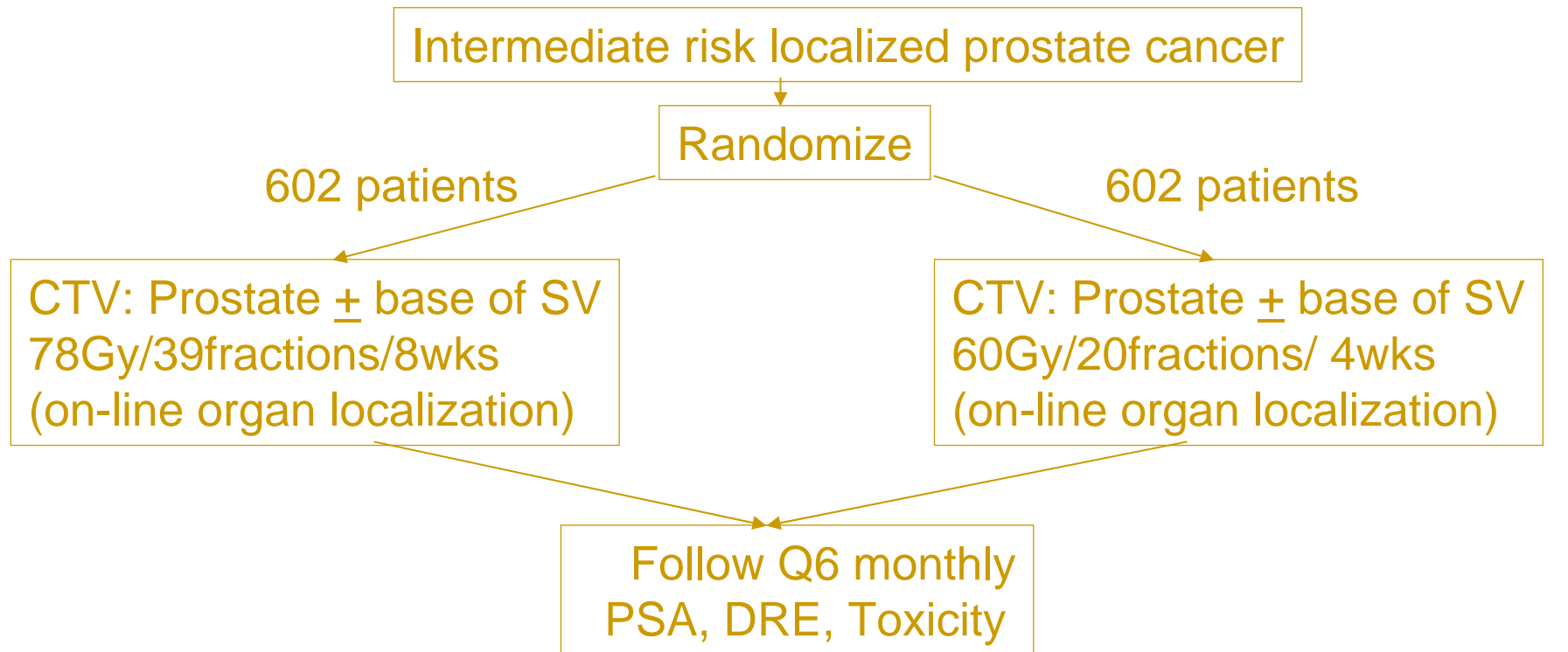
Respiratory
movements

Courtesy of David Jaffray



A randomized trial of a shorter fractionation schedule for localized intermediate risk prostate cancer.

Sponsor Ontario Clinical Oncology Group (OCOG)



Primary endpoint:
5-year bRFR
Non-inferiority design

Secondary endpoints:

1. Biochemical-Clinical Failure (BCF)
2. Prostate Cancer Specific Survival
3. Toxicity
4. Quality of Life (EPIC and SCF-12)

Boosting Research Capacity Funding for Collaborative Research

- CPC-BioNet initiative initiated in 2001
 - Encourage and support multi-disciplinary teams of prostate cancer researchers from centres across the country to work collaboratively and synergistically.
 - Vancouver General Hospital, Vancouver
 - McGill University Health Centre, Montreal
 - The University Health Network, Toronto
 - The Sir Mortimer B. Davis Jewish General Hospital, Montreal
 - McGill University Health Centre, Montreal
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Boosting Research Capacity Funding for Collaborative Research

- Vancouver General Hospital, Vancouver
 - Dr. Martin Gleave, Department of Urology
 - Dr. Paul Rennie, Jack Bell Research Centre
- Sunnybrook and Women's College Health Sciences Centre, Toronto
 - Dr. Laurence Klotz, Department of Surgery
- The University Health Network, Toronto
 - Dr. Robert Bristow, Department of Medical Biophysics
 - Dr. Neil Fleshner, Department of Surgery
 - Dr. Rama Khokha, Departments of Medical Biophysics and Lab Medicine
 - Dr. Jeremy Squire, Ontario Cancer Institute
- The Sir Mortimer B. Davis Jewish General Hospital, Montreal
 - Dr. Michael Pollak, Department of Oncology
- McGill University Health Centre, Montreal
 - Dr. Armen Aprikian, Department of Urology
 - Dr. Simone Chevalier, Department of Urology

 - Dr. Mario Chevette, Department of Urology

Boosting Research Capacity Funding for Collaborative Research

- Funding \$3,750,000 over 5 Years – Finishing 2006
 - 5th annual Meeting May 2006
 - Approximately 80 people including trainees
 - Management Committee Review June 2005
 - Unanimous support that this initiative was highly successful
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Boosting Research Capacity Funding for Collaborative Research

- Partnership with CIHR
 - Doctoral Research Awards
 - Postdoctoral Fellowships
 - Total Trainees supported 12
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Boosting Research Capacity Large Centre Training Grants

- Purpose:
 - To fund trainees at all levels of training in prostate cancer research
 - 2 Grants Awarded
 - 2001 – 2006, total \$1,000,000 each- Matched
 - Vancouver Prostate Centre
 - Princess Margaret Hospital, Toronto
 - 43 Trainees attracted into research in prostate cancer
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Informatics

- Medical Informatics Workshops
 - 2001 – Review of how existing informatics technologies could help improve prostate cancer research
 - 2004 – Prostate Cancer as a model for for Impact of Informatics on Cancer Control
 - Highly successful
 - International participation
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2006 Onwards

- Assuming funding levels do not increase
 - 3 Key “Gaps” identified that CPCRI will try to address
 - Prostate Cancer Biomarker Initiative
 - RFA Released
 - Possibility of partnership funding provincially
 - Workshops to
 - Bring Canadian Researchers together in different fields
 - May 2006 – Prostate Cancer Biomarkers
 - Other Topics include Novel Therapies and Targets/Clinical Trial Methodology; Beyond Screening, where do we go next
 - Communication
 - Partner with CPCN in “State of the Science” meeting in Summer 2007. (Report to Nation on our first 10 years)

Vision for the Future

- Revised Mandate
 - “The mission of CPCRI is to support research aimed at reducing the burden of cancer”
 - That CPCRI become the **National** coordinating body for prostate cancer research
 - Enhanced and sustainable training programs
 - Close ties to Survivor/Support community through collaboration with CPCN
 - Collaboration with Prostate Cancer Foundation
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Vision for the Future

- Increased awareness in research community of the importance of prostate cancer research
- Networks eg BioNet Network transformed into National Centre for Excellence
- Funding for CPCRI is at least to the level of CBCRA

Failure is not an option
