

**Clinical Impact of a
Clinical Specialist
Radiation Therapist (CSRT)
for patients requiring
Palliative Radiotherapy**

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How the CSRT came to be... (2003-2012)

2000

MOHLTC

(Ministry of Health and Long Term Care)
... health care culture shift

ORTAP/CCO

APRT Developmental Project

CSRT Demonstration Project – Ph I

CSRT Demonstration Project – Ph II

New CSRTs deployed

Health Care Shift → Change in Practice ...



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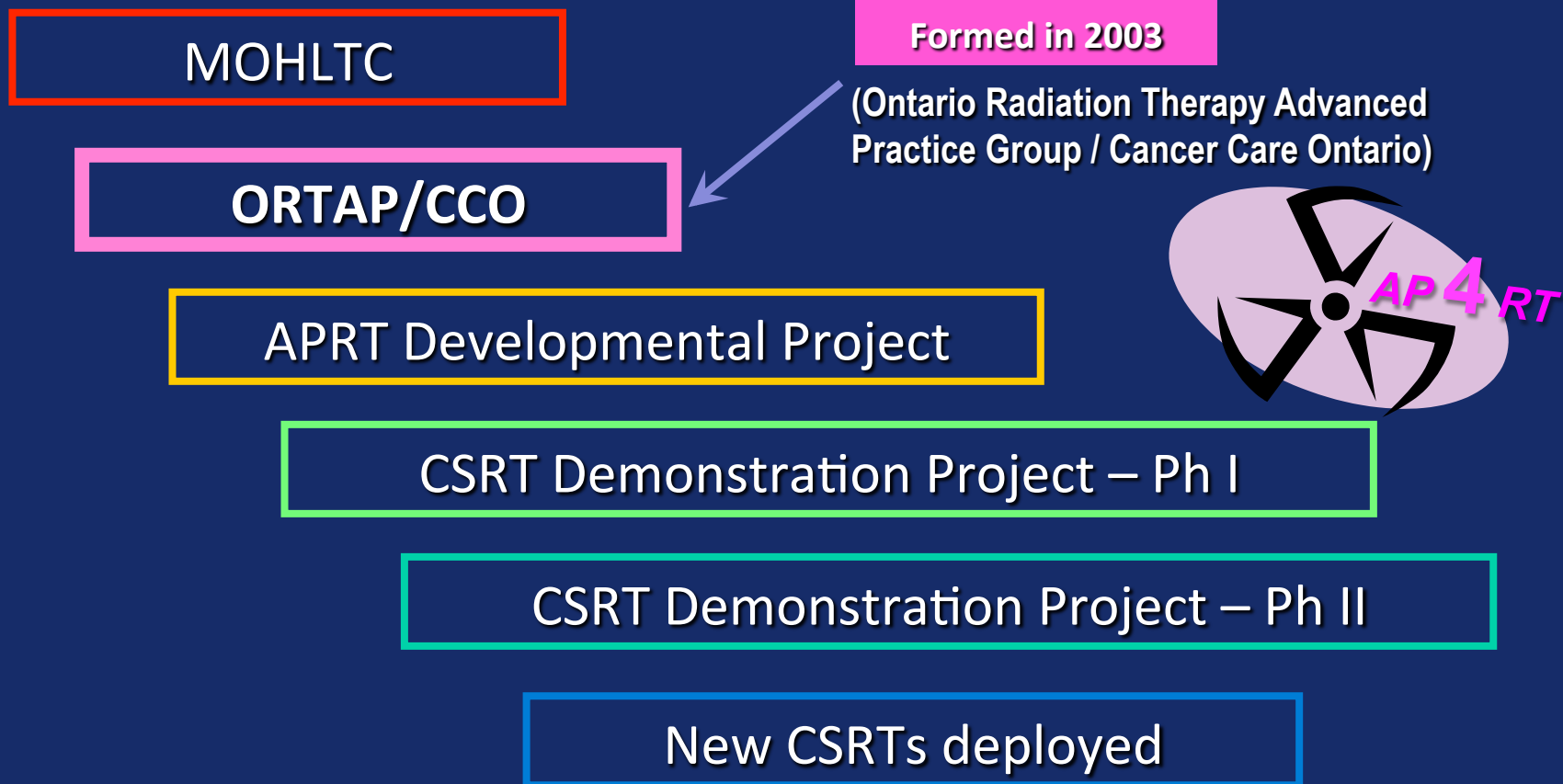
APRT Developmental Project

CSRT Demonstration Project – Ph I

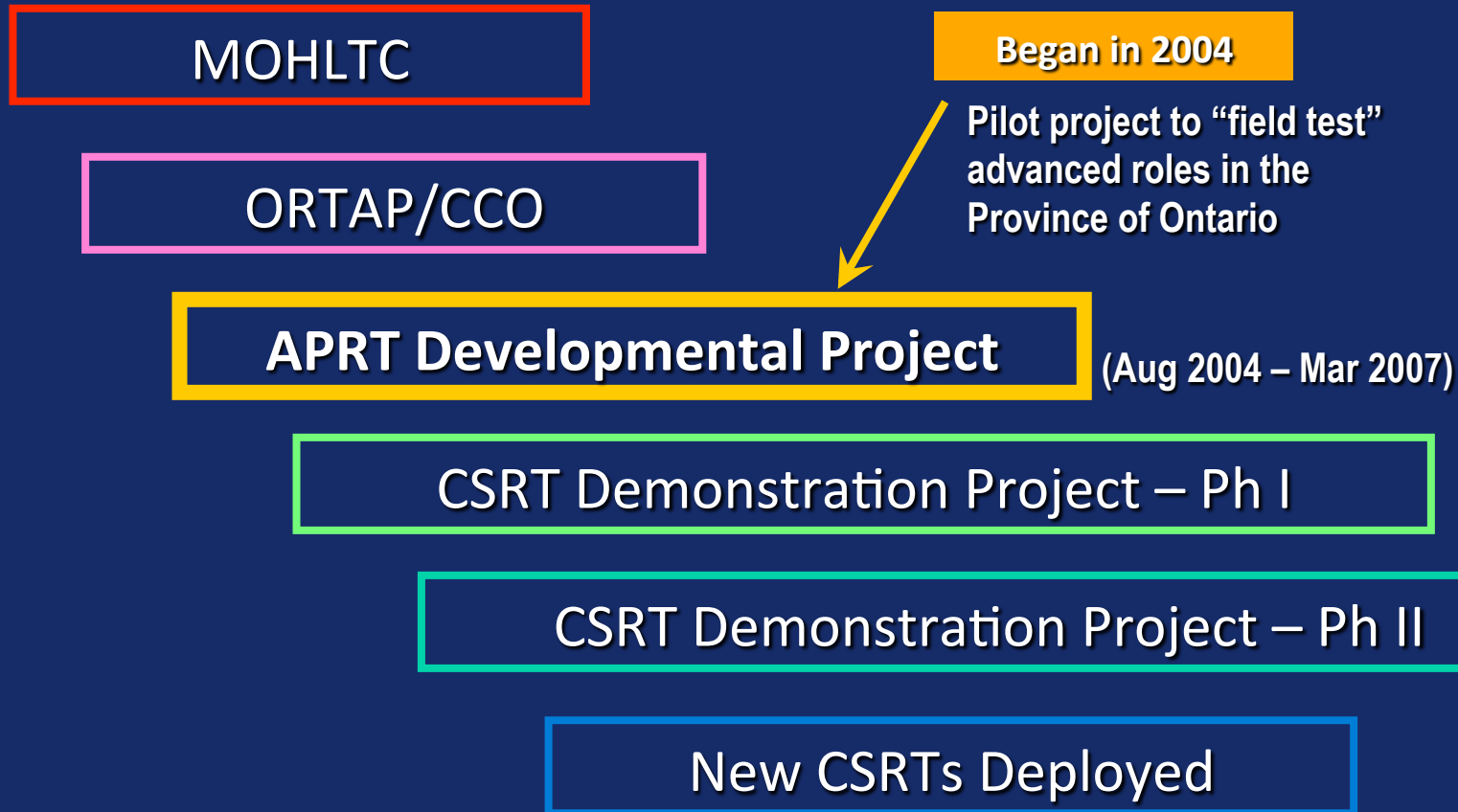
CSRT Demonstration Project – Ph II

New CSRTs deployed

How the CSRT came to be... (2003-2012)



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How the CSRT came to be... (2003-2012)

MOHLTC

HealthForceOntario
Making Ontario the Employer of Choice in Health Care

ORTAP/CCO

Began in 2007

APRT Developmental Project

Project moves forward...
Birth of “Clinical Specialist
Radiation Therapist”

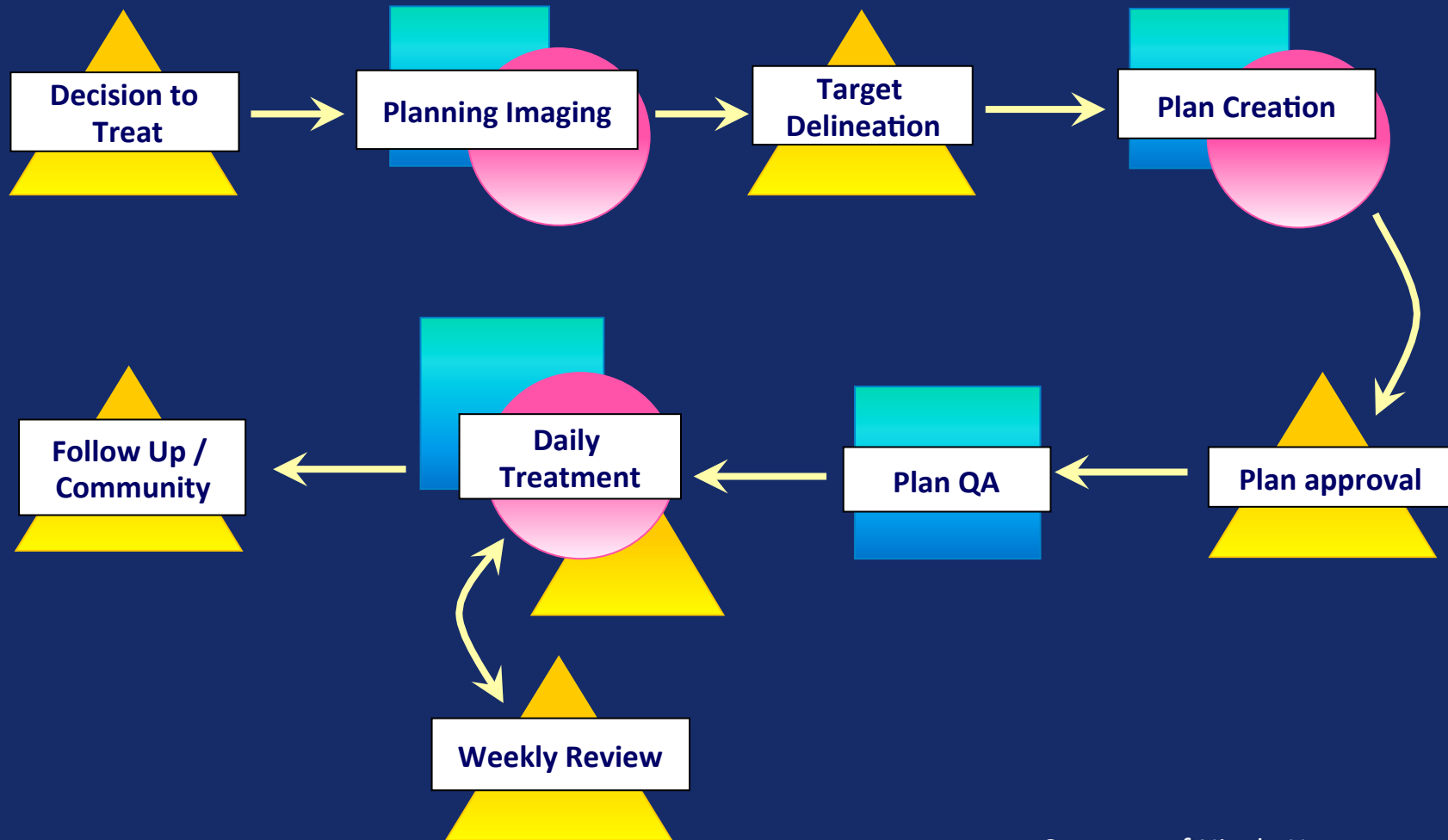
(Mar 2007 –
Mar 2008)

CSRT Demonstration Project – Ph I

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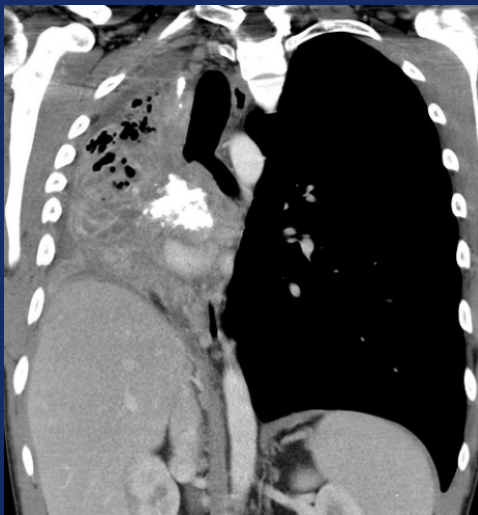
New CSRTs Deployed

Patient Care Pathway



Courtesy of Nicole Harnett

Palliative Radiation Oncology Program (PROP)



- The Radiation Medicine Program (RMP) @ PMH provides palliative RT to 2000+ patients per year
- **PROP**, in conjunction with Palliative Referral Service (PRS) program focuses on expediting care for the patients requiring palliative RT (>40% of pt load)
 - Academic program staffed by collaborative group of professionals (DRO, NP, case RN, CSRT, research assistants, volunteers...)
 - Teaching and academic focus in symptom control with palliative RT

CSRT – Palliative Care



JOB DESCRIPTION

- Advanced **clinical** and **technical** expertise
- Manage a **subset** of routine palliative referrals, such as metastases in the bone(s), lung(s), and/or brain
- Undertake **research** and **educational** activities
- With **expanded** knowledge and skills:
 - Undertake clinical assessment and hold review clinics
 - Prescribe from a list of approved drugs for symptom management

CSRT – Palliative Care



BUILDING THE ROLE

- PROP clinics are M-F in the morning
 - ▶ Good training grounds – multiple disciplines
- Patient assessment, case discussion and treatment decision-making as part of the team
- Streamline process for pts requiring palliative RT by:
 - Initiating bookings and radiation Rx
 - Delineation of G/C/PTVs or treatment fields (delegated by attending RO)
- Review clinic + see patients during 5-10 fractions
- Discharge care plans

Study Objective



- To evaluate the clinical impact of a CSRT with an expanded scope of practice in PROP clinics by analysing time data along the patient care pathway.

Methodology

WAIT TIMES Analysis

- Time frame = 8 months
n = 169 patients
- Captured time points:
WITH vs. WITHOUT
CSRT involvement
 - Patient's check-in time at PROP clinic
 - Planning CT scan appointment time
 - Actual CT appointment end time



CSRT Impact: Clinical



Time Saving

- Consult-to-Planning wait times was shorter for those patients WITH *CSRT involvement* in their care
→ *on average, patients spend at least 10% less time in the hospital (usual 4.5hr-visits)*
- CSRT was able to shorten patient's overall stay

Clinical Impact of Clinical Specialist Radiation Therapist (CSRT) for Patients Requiring Palliative Radiotherapy

Lau, M.^{1,2}, Wong, R.^{2,3}, Bezjak, A.^{2,3}, Dinniwell, R.^{2,3}, Wenz, J.^{1,2}, Harnett, N.^{1,2,3}

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INTRODUCTION



The investigation of advanced practice for radiation therapists began several years ago in Ontario, with several projects focusing on establishing the value and feasibility of developing advanced practice roles for the profession. Initial feasibility assessment took place from 2004-2006 as part of the "Advanced Practice for Radiation Therapists Developmental Project" (AP4RT). Following review

of the AP4RT report, with funding from the Ministry of Health and Long-Term Care (MOHLTC), the Initiative moved forward by implementing 5 roles under the "Clinical Specialist Radiation Therapist (CSRT) Demonstration Project" (Phase 1).

CSRT Demonstration Project Objectives

- Decrease wait times
- Increase access
- Improve health of Ontarians

One of the demonstration positions was the CSRT Palliative Care in the Radiation Medicine Program (RMP) at Princess Margaret Hospital, which provides palliative radiotherapy (pRT) to 2000+ patients per year, in part through its Palliative Radiation Oncology Program (PROP) - an academic program staffed by collaborative group of professionals, with a focus on teaching and academics in symptom control from malignancies.

PROP Objectives

- Minimize the time patients have to spend in the hospital
- Minimize patients' pain and discomfort
- Improve/optimize the processes required to move patient from initial consult to treatment planning

Clinical Specialist Radiation Therapist (CSRT) PALLIATIVE CARE



- Advanced clinical and technical expert, working at various points within the patient care pathway (PCP) within PROP
- Undertake research and educational activities related to palliative care
- Perform targeted clinical assessments and take patient history
- And eventually, with expanded knowledge and skills:
- Manage a subset of routine palliative patient referrals
- Contour target volumes and/or place fields after discussion with attending radiation oncologist(s)
- Hold follow-up review clinics for patients who have completed pRT treatment
- Prescribe approved drugs for symptom management

PROJECT OBJECTIVE

To evaluate the *clinical impact* a CSRT with an *expanded scope of practice* in PROP clinics by *analysing time data* associated with the patient care pathway (PCP).

METHODOLOGY

- Data collected at time points (TP) along the PCP for patients seen in 3 out of 5 weekly PROP clinics - August 2007 to March 2008 (see Fig. 1);
- Divided into two groups: Patients with (A) and patients without (B) CSRT's involvement in their care

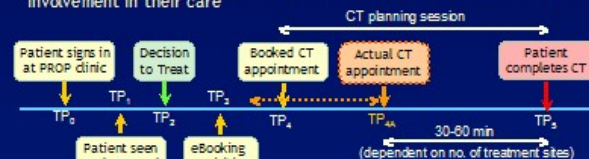


Fig. 1 (above): Time-points (TP₀ - TP₅) along the care pathway (PCP) of patients requiring palliative radiotherapy in daily PROP clinics. TP_{4a} (actual start time of CT appointment) can occur any time before or after TP₃ (booked CT appointment time). Duration of planning CT sessions is directly correlated to the number of areas to which a patient requires pRT.

RESULTS

		CSRT	DRO
# Patients Completing before Booked CT Time		50 (59.5%)	40 (44.0%)
Total # of Patients in Group		84	91

B. TIME SAVED by Patients with Same-Day Planning (min)

= Actual End Time (TP₅) - Expected End Time*

* (Expected End Time = CT Booked Time + Expected Appointment Duration)

- Positive numbers represent completion before Expected End Time

Group	n	Mean	SD	Median	p*
DRO	90	6.8	66.7	-5.0	0.14
CSRT	84	24.3	88.1	9.0	

* (Mann-Whitney test was used to compare groups.)

OUTCOME: 14 minutes in time savings per patient.

C. TOTAL TIME IN HOSPITAL (min) = PROP In (TP₀) - CT Completion (TP₅)

- Patients' length of stay in hospital from *consult* to *completion of pRT planning* was examined, including those patients whose consult (TP₀), was on different day than planning (TP_{4a})

Group	n	Mean	SD	Median	p*
DRO	89	783.2	2121.4	277.0	0.30
CSRT	82	334.8	299.8	258.0	

* (Mann-Whitney test was used to compare groups.)

OUTCOME: Analysis showed CSRT had *more* impact in shortening overall time that patients (who require pRT) spend on site. Patients spend ~5% less time in hospital (14 minutes saved out of median 277-minute stay).

DISCUSSION / CONCLUSION

- Patients, whose care involved the CSRT, completed their planning session sooner, and overall wait-times (WT) were also reduced
- Addition of a CSRT in PROP can improve efficiency of throughput of patients requiring pRT, possibly leading to improved quality of life
- Enable attending radiation oncologist (DRO) to redirect focus to more complex discipline specific tasks
→ Potential decrease of WT for patients requiring care in PROP
- Implementation of CSRT in PROP demonstrated positive clinical impact

POTENTIAL TARGETS for CSRT in Patient Care Pathway

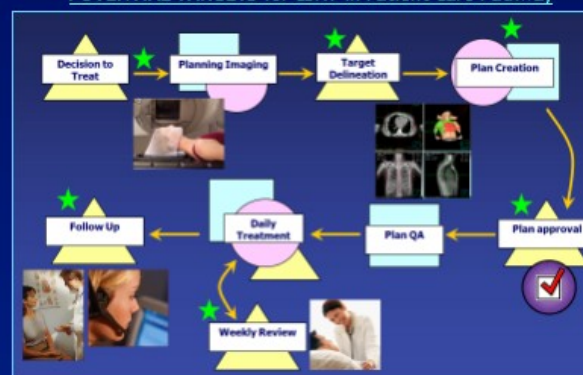


Fig. 2: Flowchart showing the multiple areas where a CSRT-Palliative Care can make an impact along the patient care pathway and alleviate some of the bottlenecks in the system.

Disciplines currently responsible:
Yellow = Radiation Oncologist
Blue = Medical Physicists
Pink = Radiation Therapists

★ Where CSRT can bring impact

FUTURE DIRECTIONS

- Concordance studies evaluating the acceptability of normal tissue contours and target volumes delineated by the CSRT, as assessed by the radiation oncologist
- Evaluation of the "clinical impact" of any changes to contours made by radiation oncologist
- Exploration of the possibility of "CSRT-run" palliative clinics for a defined population of patients
- Assessment of patients' satisfaction with care - comparing those patients whose care includes CSRT (A) and those whose did not (B)

Project was generously funded by the
Ministry of Health and Long-Term Care (MOHLTC)

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(Jul 2008 – Mar 2011)

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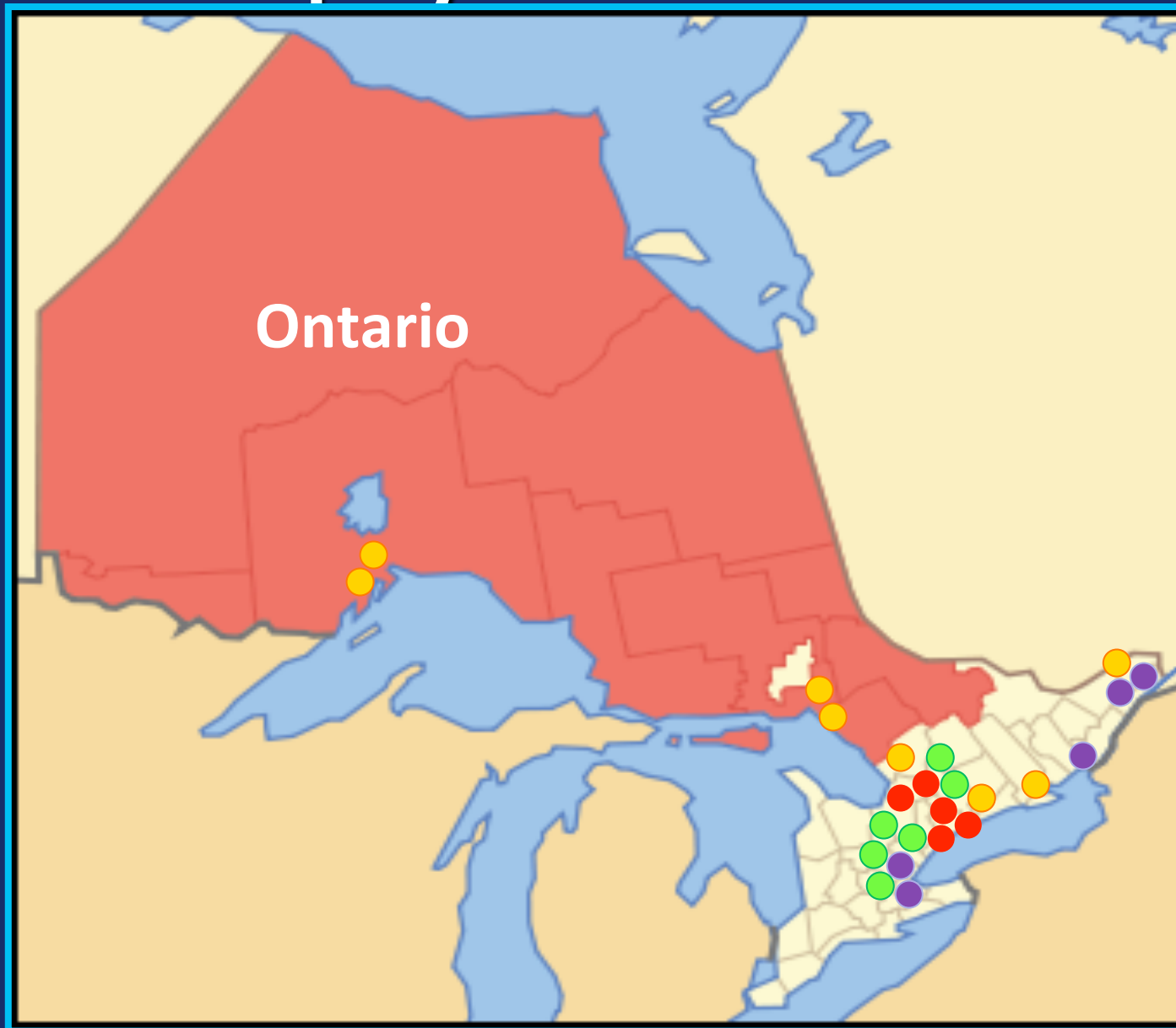
CSRT Demonstration Project – Ph II

New CSRTs Deployed

CSRTs on the Move



Deployment of CSRTs



Deployment of CSRTs



Thank You



Believe It.
WE WILL CONQUER CANCER
IN OUR LIFETIME



The Princess Margaret

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Questions?