CANCER CARE SURVEILLANCE

How frequently should cancer survivors be monitored for disease recurrence? Is more always better?

Featured PCORI-funded Study: Intensity of Post-Treatment surveillance and survival in Colorectal Cancer patients
Agenda

JUNE 23, 2019 • PCORI ENGAGEMENT AWARD

- Welcome
- Featured Guest
- Reactor Panel Questions and Discussion
- Audience Questions and Discussion
- Employer Insights
- Wrap up
- Survey
Welcome

Susan Frank
PCORI Engagement Award
Project Lead
National Alliance of Healthcare Purchaser Coalitions

Lia Hotchkiss, MPH
Director, Engagement Award Program
PCORI
Featured Guest

George J. Chang, MD, MS, FACS, FASCRS
Deputy Chair, Department of Surgical Oncology
Chief, Colon and Rectal Surgery
Professor of Surgical Oncology | Professor of Health Services Research
Director of Clinical Operations, Minimally Invasive and New Technologies in Oncologic Surgery Program

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center

National Alliance of Healthcare Purchaser Coalitions
Driving Innovation, Health and Value
1.8 million Colorectal Cancer Survivors in US

As of January 1, 2016

**Male**
- Prostate: 3,306,760
- Colon & rectum: 724,690
- Melanoma: 614,460
- Urinary bladder: 574,250
- Non-Hodgkin lymphoma: 361,480
- Kidney & renal pelvis: 305,340
- Testis: 266,550
- Lung & bronchus: 238,300
- Leukemia: 230,920
- Oral cavity & pharynx: 229,880
- **Total survivors**: 7,377,100

**Female**
- Breast: 3,560,570
- Uterine corpus: 757,190
- Colon & rectum: 727,350
- Thyroid: 630,660
- Melanoma: 612,790
- Non-Hodgkin lymphoma: 324,890
- Lung & bronchus: 288,210
- Uterine cervix: 282,780
- Ovary: 235,200
- Kidney & renal pelvis: 204,040
- **Total survivors**: 8,156,120

As of January 1, 2026

**Male**
- Prostate: 4,521,910
- Colon & rectum: 910,190
- Melanoma: 848,020
- Urinary bladder: 754,280
- Non-Hodgkin lymphoma: 488,780
- Kidney: 429,010
- Testis: 335,790
- Leukemia: 318,430
- Lung & bronchus: 303,380
- **Total survivors**: 9,983,900

**Female**
- Breast: 4,571,210
- Uterine corpus: 942,670
- Colon & rectum: 885,940
- Thyroid: 885,590
- Melanoma: 811,490
- Non-Hodgkin lymphoma: 436,370
- Lung & bronchus: 369,990
- Kidney & renal pelvis: 284,380
- Ovary: 280,940
- **Total survivors**: 10,305,870
Goals of Surveillance

Detection of Recurrence

Management of long-term sequelae of treatment

Post-treatment Continuity of Care
Psychosocial well-being
Surveillance Testing Guidelines Vary Widely

- **No further testing**
- **CT scan every 6-12 months**
- **CEA every 3 months**
- **CT scan twice in 3 years**
- **CEA every 6 months**
- **3 years**
- **5 years**
Overall Survival after Recurrence

- **Curative surgery**
- **No curative surgery**

N=735
**Scanxiety (n) “scan zi et ee”:** Anxiety and worry that accompanies the period of time before undergoing or receiving the results of a medical examination (such as MRI or CT scan).
Does Higher Surveillance Intensity Improve Detection of Recurrence or Survival?
Cohort Selection

• Collaboration to improve process for recurrence ascertainment within the NCDB

• Random sampling of 10 colorectal cancer patients within each facility for primary data abstraction

14,784 Biopsy Records
61,075 CEA Records
40,272 Imaging Records
16,967 Endoscopy Records
Test use among survivors w/o recurrence (n=6279)

Predict each facility # of tests/pt for all survivors (n=8529)

Facility clustering effect for O/E P<0.0001 imaging

Facility clustering effect for O/E P<0.0001 CEA

Compare effectiveness of intensity by facility
Intensity and Recurrence Detection

**IMAGING INTENSITY**

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<tr>
<td>p</td>
<td>0.85</td>
<td>0.71</td>
<td>0.92</td>
<td>0.96</td>
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<tr>
<td><strong>Recurrence rate (%)</strong></td>
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<td>0 20 40</td>
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**CEA INTENSITY**

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<td><strong>Median Time to Detection:</strong></td>
<td>15.1 vs 16 months</td>
<td>15.9 vs 15.3 months</td>
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Mean LI: 1.6 (95%CI 1.6-1.7)  **HI: 2.9** (95%CI 2.8-2.9)  Mean LI: 1.6 (95%CI 1.6-1.7)  **HI: 4.3** (95%CI 4.2-4.4)
Intensity and Overall Survival

Overall survival by imaging test intensity (log rank test for OE<1 vs OE≥1 p=0.9118)

Overall survival by CEA test intensity (log rank test for OE<1 vs OE≥1 p=0.1849)

Mean LI: 1.6 (95%CI 1.6-1.7)  HI: 2.9 (95%CI 2.8-2.9)
Mean LI: 1.6 (95%CI 1.6-1.7)  HI: 4.3 (95%CI 4.2-4.4)
Intensity & Salvage Surgical Treatment

**IMAGING INTENSITY**

- Mean LI: 1.6 (95% CI 1.6-1.7)
- HI: 2.9 (95% CI 2.8-2.9)

**CEA INTENSITY**

- Mean LI: 1.6 (95% CI 1.6-1.7)
- HI: 4.3 (95% CI 4.2-4.4)

*Figures show the resection rate (%) over years after surveillance start date for different stages and intensity levels.*

- **Stage I, O/E<1**
- **Stage II, O/E<1**
- **Stage III, O/E<1**
- **Stage I, O/E>=1**
- **Stage II, O/E>=1**
- **Stage III, O/E>=1**

*Statistical significance:* p=0.68, O/E<1 vs O/E>=1 for stage I
p=0.41, O/E<1 vs O/E>1 for stage II
p=0.27, O/E<1 vs O/E>=1 for stage III

Limitations

• Retrospective observational cohort study, not randomized
  • Cannot account for individual provider/patient decisions
• Surveillance intensity assigned by treatment facility
  • Additional in-facility variation may exist
• Data were collected on up to 10 patients per facility
  • Lower volume facilities could be over-represented
• Cohort was assembled in 2006-2007
  • Could result in variation in patterns of surveillance and surgery for recurrence
• Data is representative of broad, community-based practice
  • Higher rates of salvage surgery are observed at specialty centers
Summary

- Intensification of surveillance has a negligible impact on the detection of recurrence or survival
  - May slightly increase rate surgery for distant recurrence
  - No need to image more frequently than once/year
  - Earlier stage patients may require less follow-up
- Follow-up care should emphasize
  - Management of treatment associated toxicity
  - Health promotion and secondary prevention
  - Psychosocial well-being
REACTOR PANEL

Bruce Sherman, MD, FCCP, FACOEM
Chief medical officer for the National Alliance of Healthcare Purchaser Coalitions. Particular research interests in the areas of healthcare consumerism engagement, employer health benefits strategies and the business value of workforce health. Previously, he was the consulting corporate medical director for Wal-Mart Stores, Inc., Whirlpool Corporation, and the Goodyear Tire & Rubber Company.

Marianne Fazen, PhD
Executive Director for DFW Business Group on Health, an employer-led coalition of 130 Dallas-Fort Worth area employers and healthcare services organizations committed to improving healthcare quality, efficiency and accountability in North Texas. Ms. Fazen also serves as President and CEO of the Texas Business Group on Health, a statewide coalition representing the interests of Texas employers in healthcare purchasing and health policy issues.

Mark Weinstein, JD, CPA
Inaugural CEO of the Independent Colleges and Universities Benefits Association (www.icuba.org), a 16 year old self-funded, nonprofit Multiple Employer Welfare Arrangement (MEWA) serving 27 private Florida education employers, covering more than 16,000 members.
AUDIENCE QUESTIONS AND OPEN DISCUSSION
The principles discussed here may apply to treatment of other cancer types.

Post-treatment surveillance can be highly emotional; education and support can help patients to understand the role of post-treatment monitoring.

The appropriate frequency of surveillance depends on the severity and likelihood of cancer recurrence, and should be addressed between patient and their physicians.

The accuracy of the radiographic surveillance testing can be as important as the frequency of the tests for the patient. Consider an imaging center of excellence strategy.

Support and encourage efforts by professional societies to continuously evaluate and update practice guidelines.
Wrap up, Reminders, Thank you

Susan Frank
Project Lead
National Alliance of Healthcare Purchaser Coalitions

• Please complete 3 question survey
• A Certified Employee Benefits Specialist (CEBS) credit is offered for this webinar.
• Link here for PCORI Portal on National Alliance Website
• Thank you to our Advisory Committee
Thank you to our Advisory Committee Members

- Neil Goldfarb, Greater Philadelphia Business Coalition on Health (Chair)
- Karen Van Caulil, Florida Health Care Coalition
- Jack Mahoney, Florida Health Care Coalition
- Bruce Sherman, Employers Health Coalition & Buck Consultants at Xerox
- Emma Hoo, Pacific Business Group on Health
- Mark Weinstein, the CEO of the Independent Colleges and Universities Benefits Association
- Peggy Schubert, a Senior Consultant at Gallagher