UTILIZING CT COLONOGRAPHY TO REACH 80% BY 2018!

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COMPLEMENTARY EXAMS
LEADING TO CRC “PREVENTION”
ACRIN TRIAL 2008
- Multicenter NCI & NIH sponsored
- 2600 screened
- Sensitivity: 90% (1cm + polyps)
- Specificity: 86%
- LESS for diminutive polyps (<6mm)
<table>
<thead>
<tr>
<th>Measure of Diagnostic Accuracy</th>
<th>1mm – 5mm Polyps</th>
<th>6mm – 9mm Polyps</th>
<th>&gt;10mm Polyps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>70%</td>
<td>73-98%</td>
<td>90%-95%</td>
</tr>
<tr>
<td>Specificity</td>
<td>80%</td>
<td>89-91%</td>
<td>85%</td>
</tr>
</tbody>
</table>

CTC CANCER DETECTION

- 11,000 + participants
- 96.1% sensitivity
- 100% sensitivity with tagging

Colorectal Cancer: CT Colonography and Colonoscopy for Detection—Systematic Review & Meta-Analysis; Radiology: Vol. 259:2, May 2011
- 2 Large studies, US CLINICAL OUTCOMES RESEARCH INITIATIVE (13,992 pts) & Korean study (17,834 pts)
- Both found .03% cancer rate in diminutive polyps (<6mm)

## CTC Study of 3192 asymptomatic screening candidates

- carcinoma in only 0.9% of 5–10 mm polyps

<table>
<thead>
<tr>
<th>STRATEGIC SUMMARY</th>
<th></th>
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<tbody>
<tr>
<td>1-5 mm polyps on CTC</td>
<td>Cont. routine screening</td>
</tr>
<tr>
<td>6-9 mm polyps on CTC</td>
<td>Surveillance by CTC or OC</td>
</tr>
<tr>
<td>10 mm polyps on CTC</td>
<td>Recommend polypectomy</td>
</tr>
</tbody>
</table>


BENEFITS TO CRC SCREENING

- Minimal invasiveness, no anesthesia
- Low risk of complications: almost zero risk of perforation
- Good patient exam tolerance
- Other abnormalities in the abdomen and pelvis can be revealed
- Cost effective for population screening
- CTC is beneficial in detecting CRC especially in the right colon
## Patient Selection

<table>
<thead>
<tr>
<th>Favorable Candidates</th>
<th>Contraindicated Candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Risk Screening candidates</td>
<td>In acute abdominal conditions such as diverticulitis</td>
</tr>
<tr>
<td>Patient’s with Safety issues for Optical Colonoscopy</td>
<td>Screening in patients with IBD and hereditary colonic syndromes</td>
</tr>
<tr>
<td></td>
<td>Relative risk with hernia</td>
</tr>
<tr>
<td>Anesthesia, hernia, obstruction, bleeding</td>
<td></td>
</tr>
<tr>
<td>Pts. Avoiding OC</td>
<td></td>
</tr>
<tr>
<td>Younger pts.</td>
<td></td>
</tr>
<tr>
<td>Fearful ?</td>
<td></td>
</tr>
</tbody>
</table>
CHALLENGING CASES FACILITATED BY CTC

COLORECTAL CANCER

Ventral Hernia

MALROTATION
2 years preceding CMS denial for screening CTC, 2009

- CTC was utilized appropriately among asymptomatic patients to expand screening

Minority populations

- Less likely to be aware of colorectal cancer screening procedures
- More likely to believe screening is only needed after symptoms develop;
- Face barriers to colorectal cancer screening compliance.
**REACHING THE GOAL!**

**80% BY 2018!**

- Of 10,538 claims, 83% had appropriate clinical indications for CTC
- 47% Received a primary CTC screening exam
- 53% Referred as a result of an incomplete optical colonoscopy
- 47% received CTC exam on the same day as OC
- 10,538 CTC Medicare claims screening exams reviewed

Evidence of increased programmatic CRC screening rates with CTC
- The University of Wisconsin
- Colon Health Initiative (CHI) in Bethesda
- Walter Reed National Military Medical Center CRC screening increased with integration of CTC screening

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We need to diversify options to reach 80 by 2018!

<table>
<thead>
<tr>
<th>Test</th>
<th>Pro</th>
<th>Con</th>
<th>Sens; Spec</th>
</tr>
</thead>
<tbody>
<tr>
<td>gFOBT</td>
<td>Cheap, easy, in home</td>
<td>Mess with stool. False negative/positives. Annual.</td>
<td>70%; 93%</td>
</tr>
<tr>
<td>FIT</td>
<td>No diet restriction, portable more sensitive/specifc than guaiac, 1 sample</td>
<td>Mess with stool. Still false negatives. Annual.</td>
<td>77-85%; 90-91%*</td>
</tr>
<tr>
<td>Colo</td>
<td>Detect and remove polyps, High sensitivity</td>
<td>Bowel prep, day off work, costs, complications</td>
<td>95%; 100%</td>
</tr>
<tr>
<td>Sig</td>
<td>Detect and remove polyps, High sensitivity</td>
<td>Bowel prep, proximal colon not seen</td>
<td>58-75%; 100%</td>
</tr>
<tr>
<td>CTC</td>
<td>High sensitivity for polyps/cancer, No sedation</td>
<td>Bowel prep, incidental findings, ? Radiation</td>
<td>95%; 92% (polyp&gt;9mm)</td>
</tr>
</tbody>
</table>

Chiu Clin Gastroenterol Hepatol. 2009 Apr;7(4):463-70;
USPSTF RECOMMENDATION "A" & INSURANCE COVERAGE

- **PRIVATE PAYORS**
  - Screening CTC covered
  - Affordable Care Act
  - No out of pocket co-pay

- **CMS "Screening CTC Non-Covered"**
  - CMS: “CTC Diagnostic Covered”
    - Obstruction
    - Patient Safety
    - Variant Anatomy
DID YOU KNOW?

- Since June 2016 knowledge of commercial plan coverage for CTC has increased dramatically in the entire country.
- 75% of the states mandate coverage of Colorectal Cancer (CRC) screening which includes CTC.
- Commercial insurers cover CTC as a screening test: i.e. United, Anthem, Wellpoint, Aetna, Cigna, Health care Services Corporation and many Blue Shield Blue Cross providers across the USA along with hundreds of local plans.
- Medicare and Medicare Advantage plans cover CTC as a diagnostic test.

This information is available at: www.myctcolonography.com