Navigating Colorectal and Pancreatic Cancer Patients in a Multidisciplinary Cancer Center

Christine Guarnieri, MSN, RN-BC, OCN
• Objectives
  – At the end of this presentation, participants will be able to:
    • Discuss incidence, risk factors, screening and prevention
    • Identify diagnosis, staging and treatment options
    • Appreciate national benchmarks and quality indicators
    • Understand the referral process and support services
    • Develop patient satisfaction evaluations
We Are...

- Mission driven
- Goal oriented
- Disease based
- Patient focused
- Multi-disciplined
We Offer...

- Research
- Education
- Support Services
- Community Outreach
Our Team

Nurse Navigator

Medical Oncology
Radiation Oncology
Interventional and Diagnostic Radiology

Surgery

Administrative Staff, Nursing Staff, Receptionist, Medical Assistants

Gastroenterology / Advanced Endoscopy

Patient
Faces of Colorectal Cancer

Who’s at Risk???
Colorectal Cancer Screening

A Shared Goal of 80% by 2018

BRFSS (behavioral risk factor surveillance system) results from 2013-2014

% of adults aged 50-75 have received colorectal cancer screening based on recent guidelines

Nassau County: 70.6 %
New York State: 69.3 %

Long Island Region: 72.1 %

% of adults aged 50-75 with annual income less than $25,000 have received colorectal cancer screening based on recent guidelines

Long Island Region: 62.3 %
New York State: 61.4 %

Colorectal Cancer National Statistics

At a Glance

- Estimated New Cases in 2017: 135,430
- % of All New Cancer Cases: 8.0%
- Estimated Deaths in 2017: 50,260
- % of All Cancer Deaths: 8.4%

Number of New Cases and Deaths per 100,000: The number of new cases of colon and rectum cancer was 40.1 per 100,000 men and women per year. The number of deaths was 14.8 per 100,000 men and women per year. These rates are age-adjusted and based on 2010-2014 cases and deaths.

Lifetime Risk of Developing Cancer: Approximately 4.3 percent of men and women will be diagnosed with colon and rectum cancer at some point during their lifetime, based on 2012-2014 data.

Prevalence of This Cancer: In 2014, there were an estimated 1,317,247 people living with colon and rectum cancer in the United States.
### Colorectal Cancer Statistics at Winthrop

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<tr>
<td>Colon excluding rectum</td>
<td>112</td>
<td>105</td>
<td>124</td>
<td>113</td>
<td>110</td>
<td>110</td>
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<tr>
<td>Rectum &amp; Rectosigmoid</td>
<td>37</td>
<td>50</td>
<td>46</td>
<td>52</td>
<td>62</td>
<td>47</td>
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<td>Junction</td>
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<td>Total</td>
<td>149</td>
<td>155</td>
<td>170</td>
<td>165</td>
<td>172</td>
<td>157</td>
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Colon Cancer Diagnosis

• Clinical Presentation
  - History & Physical
  - Sigmoidoscopy
  - Colonoscopy with biopsy
  - Imaging for distant disease
    • CT chest/abd/pelvis
    • MRI
    • PET or PET/CT
Rectal Cancer Diagnosis

• Clinical Presentation
  – History & Physical
  – Rectal ultrasound
  – Pelvic CT
  – Pelvic MRI
  – FNA of nodes
Rectal Cancer Staging

• **MOST** high risk rectal cases receive neoadjuvant treatment

• **MUST** assign clinical stage prior to neoadjuvant treatment

• Determining factors of “high risk” rectal cancer eligible for neoadjuvant treatment
  - Pelvic extent of disease (T N)
  - Absence of extrapelvic mets (M)
  - MSI stability (high vs. low)
Microsatellite Instability (MSI)
Colorectal tumors with MSI have distinctive features, including a tendency to arise in the proximal colon, lymphocytic infiltrate, and a poorly differentiated, mucinous or signet ring appearance. They have a slightly better prognosis than colorectal tumors without MSI and do not have the same response to chemotherapeutics.

KRAS Gene Analysis Mutation Status
The presence of KRAS mutations has been identified as a potent predictor of resistance to EGFR-directed antibodies such as cetuximab or panitumumab. These agents should therefore be applied only in tumors with a wild-type status of the KRAS gene.

Genomic Testing
Mismatch Repair Deficiency
Mutations in one of several DNA MMR genes (MLH1, MSH2, MSH6, PMS2, EPCAM) are found in Lynch syndrome (hereditary nonpolyposis CRC [HNPCC]) and in 15 to 20 percent of sporadic colon cancers.

Boland, C. R., & Goel, A. (2010).
Prognostic Indicators
Colon & Rectal Cancer

• Carcinoembryonic antigen (CEA)
• Tumor Deposits (TD)
• Circumferential resection margin (CRM)
• Perineural invasion (PN)
• Distant Metastasis
• At least 12 lymph nodes dissected in radical resections
• Microsatellite instability (MSI)
• Mutation status (KRAS/BRAF)
• Tumor regression grade (with neoadjuvant therapy)
Navigating the Colorectal Cancer Patient

- Colon Cancer
  - Gastroenterology
  - Medical Oncology
    - Distress Screening
    - Chemo Orientation
  - Surgical Oncology
    - Port Placement
  - Radiology (CT Scan)

- Rectal Cancer
  - Gastroenterology
  - Surgical Oncology
    - Colorectal Surgeon
  - Radiation Oncology
  - Medical Oncology
    - Distress Screening
    - Chemo Orientation
    - PO Chemo Adherence
  - Radiology (CT Scan)
  - Surgical Oncology
    - Colorectal Surgeon
  - Ostomy Marking
Colon Cancer Case Study

**AF**
57-year-old blind male, lives with his wife PM Hx HTN, hyperlipidemia, DM
CC: Weakness, tired, general malaise

July 2014  Normocytic anemia (Hb 10.5g/dl) **elevated CEA of 183**. Patient refused colonoscopy at that time.

January 2015  s/p Iron supplementation hemoglobin 10.0g/dL. Additional testing revealed an **increase in CEA to 472**

March 2015  EGD and colonoscopy revealed malignant lesion descending colon biopsied and pathology proven adenocarcinoma of the colon.

March 2015  CT imaging C/A/P revealed proximal sigmoid colon mass with applecore morphology measuring 4.4 cm. Infiltration of the mesocolon and mildly prominent mesocolic lymph nodes. Numerous hepatic lesions compatible with metastatic disease.

April 2015  He was evaluated by colorectal surgeon and found to be unresectable then referred to oncology for further management.

April 2015  **Patient referred to Nurse Navigator**

**Opportunities / Lessons Learned**
Assessment: Patient distress score not evaluated, understanding (elevated CEA and importance of timely follow-up) not evaluated
Planning: Timely follow up (7 months until EGD/colonoscopy)
Implementation: Follow up and treatment plan made in collaboration with patient. Patient lost in the shuffle.
Evaluation: Patient understanding of treatment related side effects and next steps in treatment plan. Ongoing process.
Rectal Cancer Case Study

- BH

85 year old female with PMH HTN, macular degeneration, legally blind, lives alone
CC: rectal pain, constipation and bright red blood per rectum with bowel movements for the past year

March 2015 Colonoscopy positive for rectal mass, pathology consistent with moderately differentiated invasive adenocarcinoma of the rectum, with concern for posterior vaginal wall invasion.

March 2015 Patient referred to Nurse Navigator

March 2015 Recommendations: neo-adjuvant chemo/RT for T3N1 (Stage IIIB)
CT C/A/P, clinical staging with endo-rectal US, consult with Oncology, Radiation Oncology, Oncology SW, Dietitian,
Referred to VNS for Cancer Care support program
Referred for transportation assistance

April 2015 Begin neo-adjuvant capecitabine / radiation x 25 treatments

July 2015 Surgical resection and creation of end colostomy
Referred for ostomy marking and ostomy support service

August 2015 Begin adjuvant treatment for ypT1N0 adenocarcinoma

Opportunities / Lessons Learned

Assessment: Patient distress screening evaluation, understanding disease and treatment recommendation.
Planning: Timely referral to multiple disciplines, timely follow up, PO chemo adherence and education
Implementation: Follow up and treatment plan made in collaboration with patient
Evaluation: Patient understanding of treatment related side effects and next steps in treatment plan
<table>
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<tr>
<th>Condition</th>
<th>Total Cases</th>
<th>Observed Events</th>
<th>Observed Rate</th>
<th>Predicted Rate</th>
<th>Expected Rate</th>
<th>Odds Ratio</th>
<th>Lower CI</th>
<th>Upper CI</th>
<th>Outlier Decile</th>
<th>Comment*</th>
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<tr>
<td>COLORECT Mortality</td>
<td>225</td>
<td>6</td>
<td>2.67%</td>
<td>2.74%</td>
<td>2.76%</td>
<td>0.98</td>
<td>0.57</td>
<td>1.70</td>
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<td>COLORECT Morbidity</td>
<td>225</td>
<td>29</td>
<td>12.89%</td>
<td>12.98%</td>
<td>13.20%</td>
<td>0.98</td>
<td>0.69</td>
<td>1.38</td>
<td>5</td>
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<tr>
<td>COLORECT Length of Stay</td>
<td>191</td>
<td>31</td>
<td>16.23%</td>
<td>16.57%</td>
<td>18.36%</td>
<td>0.86</td>
<td>0.58</td>
<td>1.27</td>
<td>4</td>
<td>As expected</td>
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<td>COLORECT Pneumonia</td>
<td>224</td>
<td>1</td>
<td>0.45%</td>
<td>1.15%</td>
<td>1.93%</td>
<td>0.58</td>
<td>0.25</td>
<td>1.36</td>
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<tr>
<td>COLORECT Unplanned Intubation</td>
<td>225</td>
<td>3</td>
<td>1.33%</td>
<td>1.43%</td>
<td>1.45%</td>
<td>0.98</td>
<td>0.61</td>
<td>1.59</td>
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<td>COLORECT Ventilator &gt; 48 Hours</td>
<td>225</td>
<td>7</td>
<td>3.11%</td>
<td>2.70%</td>
<td>2.32%</td>
<td>1.23</td>
<td>0.63</td>
<td>2.39</td>
<td>9</td>
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<td>COLORECT VTE</td>
<td>225</td>
<td>2</td>
<td>0.89%</td>
<td>1.30%</td>
<td>1.47%</td>
<td>0.88</td>
<td>0.48</td>
<td>1.63</td>
<td>2</td>
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<td>COLORECT Renal Failure</td>
<td>225</td>
<td>1</td>
<td>0.44%</td>
<td>1.10%</td>
<td>1.26%</td>
<td>0.85</td>
<td>0.47</td>
<td>1.53</td>
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<td>Exemplary</td>
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<tr>
<td>COLORECT UTI</td>
<td>225</td>
<td>3</td>
<td>1.33%</td>
<td>1.44%</td>
<td>1.51%</td>
<td>0.95</td>
<td>0.49</td>
<td>1.87</td>
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<td>COLORECT SSI</td>
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<td>14</td>
<td>6.25%</td>
<td>6.33%</td>
<td>6.48%</td>
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<td>COLORECT Sepsis</td>
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<td>4</td>
<td>1.83%</td>
<td>2.17%</td>
<td>2.44%</td>
<td>0.89</td>
<td>0.49</td>
<td>1.62</td>
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<tr>
<td>COLORECT C. diff Colitis</td>
<td>225</td>
<td>1</td>
<td>0.44%</td>
<td>1.00%</td>
<td>1.28%</td>
<td>0.77</td>
<td>0.37</td>
<td>1.63</td>
<td>1</td>
<td>Exemplary</td>
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<td>COLORECT ROR</td>
<td>225</td>
<td>12</td>
<td>5.33%</td>
<td>4.68%</td>
<td>4.08%</td>
<td>1.16</td>
<td>0.74</td>
<td>1.80</td>
<td>9</td>
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<td>COLORECT Readmission</td>
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<td>20</td>
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<td>8.64%</td>
<td>8.50%</td>
<td>1.02</td>
<td>0.77</td>
<td>1.35</td>
<td>7</td>
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Pancreatic Cancer

Stage IV Adenocarcinoma of Pancreas  
20 Month Survival

Pancreatic Neuroendocrine Tumor  
8 year survival
Pancreatic Cancer National Statistics

Cancer Stat Facts: Pancreas Cancer

Statistics at a Glance

At a Glance

Estimated New Cases in 2017 53,670
% of All New Cancer Cases 3.2%
Estimated Deaths in 2017 43,090
% of All Cancer Deaths 7.2%

Number of New Cases and Deaths per 100,000: The number of new cases of pancreas cancer was 12.5 per 100,000 men and women per year. The number of deaths was 10.9 per 100,000 men and women per year. These rates are age-adjusted and based on 2010–2014 cases and deaths.

Lifetime Risk of Developing Cancer: Approximately 1.6 percent of men and women will be diagnosed with pancreas cancer at some point during their lifetime, based on 2012–2014 data.

Prevalence of This Cancer: In 2014, there were an estimated 64,668 people living with pancreas cancer in the United States.

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<td>Pancreas</td>
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<td>69</td>
<td>67</td>
<td>69</td>
<td>73</td>
<td>95</td>
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<tr>
<td>Gall Bladder / Other Biliary</td>
<td>13</td>
<td>16</td>
<td>9</td>
<td>16</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>Liver &amp; Intrahepatic Bile Duct</td>
<td>8</td>
<td>14</td>
<td>14</td>
<td>18</td>
<td>20</td>
<td>36</td>
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<tr>
<td>Total</td>
<td>86</td>
<td>99</td>
<td>90</td>
<td>103</td>
<td>115</td>
<td>149</td>
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Pancreatic Cancer Diagnosis

- Clinical Presentation
  - History & Physical
  - Jaundice
  - Labs
  - Radiology Imaging
    - CT Scan
    - MRI
  - Endoscopic Ultrasound
Genetic Mutation Analysis
Risk for Pancreatic Cancer

Diagnosis younger than 60, more than one cancer in the family history
2 or more family members with pancreatic cancer

- APC - Familial adenomatous polyposis (FAP) syndrome
- BRCA1 & BRCA 2 - Hereditary breast-Ovarian cancer syndrome
- CDKN2A & P16 – Mutation supports development of pancreatic cancer in melanoma prone family
- MLH1, MSH2, MSH6, PMS2, EPCAM - Lynch Syndrome (HNPCC or hereditary nonpolyposis colorectal cancer)
- STK11 - Peutz-Jeghers Syndrome (Polyps & Spots Syndrome)
- TP53 - Li-Fraumeni Syndrome
Navigating Pancreatic Cancer Patient

- Radiology
- Advanced Endoscopy
  - EUS
- Surgical Oncology
- Medical Oncology
- Chemo Orientation
- Radiation Oncology
- Nutrition / Dietitian
- Social Work
  - Support Group
- Palliative Care
  - Pain Management
  - Symptom Management
Pancreatic Cancer Case Study

- AS
  50 year old male, uninsured, single, lives with friend/relative, PMHx: HTN, HLD, CC: Weight loss, dyspepsia, clay colored stools, pruritis, jaundice sclera

October 2015
  presents to ED for evaluation and is admitted to medical service
  CT C/A/P, revealed pancreatic head mass.
  ERCP with bx positive for malignant cells
  Patient referred to Nurse Navigator

November 2015
  Whipple surgery for T3N1 invasive ductal adenocarcinoma of pancreas

December 2015
  Referred to adjuvant chemo, complicated by TTP
  Referred to plasmapherisis, than back to chemotherapy

October 2016
  Recurrence - metastatic to liver
  Referred to Interventional Radiology, tissue analysis for mutation testing, referral for clinical trials

Opportunities / Lessons Learned
- Assessment: Patient distress score initiated on diagnosis, Psychosocial evaluation and referral to SW, nutrition, transportation, Financial Aid
- Planning: Timely follow up and referral process
- Implementation: Treatment plan made in collaboration with patient
- Evaluation: Patient understanding of treatment related side effects and next steps in treatment plan
Percentile Rank of Collaborative Hospitals

January 2016 Report
Data Collected July 1, 2014 to June 30, 2015

Whipple Pancreatectomy Mortality

Whipple Pancreatectomy Morbidity

Whipple Pancreatectomy Surgical Site Infection

Whipple Pancreatectomy Sepsis
Referral process

• Multidisciplinary Cancer Conference
  – Biweekly Tumor Boards

• Direct referral
  – Website resource page
  – Primary Care Physician
  – “Oh! By the way there’s a patient….”

• Referral Checklist Sheet
**Patient Referral Checklist**

**Cancer Referral Checklist**

*For assistance with referrals*

**Please contact:**

Christine Guarnieri, MSN, RN-BC, OCN  
P - 516-663-2601   F - 516-742-4207

**Oncology Nurse Navigator:**  
Colorectal/Gastrointestinal/Pancreatic Cancers

<table>
<thead>
<tr>
<th>Hospital/Program</th>
<th>Contact Information</th>
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</table>
| Winthrop Oncology / Hematology                        | Phone - 516-663-9500  
Fax - 516-663-4613  
120 Mineola Blvd.  
Phone - 516-663-4510  
Fax - 516-663-2988 |
| Winthrop Infusion Center                              | Phone - 516-663-4510  
Fax - 516-663-2988 |
| Winthrop Radiation Oncology                           | Phone - 516-663-2501  
Fax - 516-663-8558 |
| Winthrop Gastroenterology                             | Phone - 516-663-2066  
Fax - 516-663-4655 |
| Winthrop Radiology for PET/CT                         | Phone - 516-663-2300  
HopeLyn Burger, Coordinator  
@ Winthrop University Hospital |
| Winthrop Surgical                                     | Phone – 516-663-3300 |
| Winthrop Dept. of Genetic Testing                     | Phone 516-663-2657  
120 Mineola Blvd Suite 220  
Mineola, NY 11501 |
| Winthrop Radiology(CT/MRI)                             | Phone – 516-663-4510 |
Referrals to support the Colorectal and Pancreatic cancer patient

- Social Work Referral
  - Distress Screening
- Financial Assistance
- Cancer Support Groups
- Nutritional Assessment
- Community Resources
- Clinical Trial
- Palliative Care
  - Quality of Life
  - Pain Management

https://clinicaltrials.gov/
Oncology Nurse Navigator Program Patient Satisfaction Survey

Institute for Cancer Care

Oncology Nurse Navigators are registered nurses who are dedicated to assisting the cancer patient and their loved ones throughout their entire cancer care experience. Their goal is to decrease frustration by helping cancer patients better understand their diagnosis, prognosis and treatment plan.

Instructions: You recently were assisted by one of our Oncology Nurse Navigators. We would appreciate any feedback that will help us to enhance our service to best meet your needs or help recognize areas of improvement. Please circle the number that best represents your feelings. After you have completed the survey, please mail in the enclosed envelope. Thank you for your participation.

At what point during your care did you first have contact with the nurse navigator? Circle one
- At initial diagnosis
- Before surgery
- After surgery
- Before or after chemo radiation
- Other

Would you have found it beneficial to receive navigation services earlier? Yes/No

Which services to your care did the navigator assist you with? Please circle.
- Coordination of Appointments
- Learning and educational resources
- Financial assistance
- Insurance assistance
- Caregiver assistance
- Counseling services
- Communication concerns with medical personnel
- Support groups
- Transportation assistance
- Nutrition

Did these support services meet your needs? Yes/No

Suggestions or Comments: __________________________________________

Name (optional) __________________________________________
A day in the life…

1. **Patient diagnosis and referral**

2. **Team or physician consultants and nurse navigator**

3. **Case review and treatment plan**

4. **Nurse navigator coordinates patient preparation and necessary tests**

5. **Patient is evaluated by team and assessed by nurse navigator**

6. **Nurse navigator explains complex information and treatment plan to patient and family, coordinates additional tests, referrals, second opinions, and pre-authorizations**

7. **Nurse navigator reviews team recommendation with patient**

8. **Nurse navigator maintains contact with patient**

9. **Nurse navigator guides patient through treatment process with regular and frequent follow up. Refers to additional services as necessary. Ensures communication between care settings.**
• By identifying incidence, prevalence and risk factors for colorectal and pancreatic cancer in our communities Nurse Navigators can develop screening and prevention programs to better serve these populations

• Understanding diagnosis, staging and treatment options for colorectal and pancreatic cancer provides the Nurse Navigator with information for proper patient guidance and management

• National Benchmarks and Quality Indicators… “How are we doing” as an accredited cancer program

• In this multidisciplinary setting, a streamlined referral processes is key to removal of actual and potential barriers to patient care

• A Patient Satisfaction Survey is the best tool to measure successes and challenges for navigation service
References


