

Introduction

Colorectal cancer (CRC) is the second leading cause of cancer death in the United States with 143,000 new cases and 51,000 estimated deaths in 2012 [1]. The benefits of **early detection** are reflected in a 90% 5-year survival rate for early stage cancers [1]. CRC screening offers the best chance to reduce mortality, although this cancer can still be diagnosed after the onset of symptoms. Early diagnosis based on symptoms may be difficult as delays can occur at various points in the process.

Understanding why diagnostic delay (DD) occurs is the first step to reducing it. Among the **factors** that have been associated with DD in CRC patients are **presence of non-specific symptoms, rural residence, patients education and non-recognition or denial of symptoms** [2]. **Ethnicity and socioeconomic status** are additional factors that are proven to play a major role in health care disparities [3].

Diagnosis Route	Description
Screen-Detected	Detected via bowel screening programs
GP Cancer referral	Urgent referral from GP with the suspicion of cancer
Emergency	An emergency route via ER, emergency GP Referral, emergency transfer
GP Referral	Elective or urgent referral without the suspicion of cancer
Inpatient Elective	Where no earlier admission can be found before admission from a waiting list, booked or planned
Other Outpatient	An elective route starting with an outpatient appointment: either self-referral, consultant to consultant, other or unknown referral.
Unknown	Data is missing

Table 1. Routes To Diagnosis

Technique

It is imperative to understand what factors contribute to disparities in CRC detection. The goal of our project is to study DD in CRC patients treated at a tertiary care academic safety-net hospital and to investigate the possible factors that may contribute to DD in this patient population.

- *Scope-* There is an urgency to treat colorectal cancer (CRC) patients who associate themselves with diagnostic delays (DD). Correlating factors are: presence of non-specific symptoms, rural residence, patient's education and non-recognition or denial of symptoms. DD in CRC has been significantly and negatively associated with outcomes and certain cancer disparities.
- *Purpose-* The benefits of early detection are reflected in a 90% 5-year survival rate for early stage cancers. Therefore, it is imperative to understand what factors are contributing to delays and disparities in CRC detection.

Results

The project based on Cancer Care and "Delayed Diagnosis" is currently a work-in-progress. The Cancer Care Pathway designed by the LSU Health Science Center's Department of Urologic Oncology shows promise as a highly effective strategy to improve diagnostic resolution follow-up among the ethnic minority population with abnormal CRC screenings.

Conclusions

Diagnostic delay (DD) is an important factor to consider regarding cancer disparities. In general, substantial barriers to early detection and diagnosis include lower rates of screening by minorities [4] and access issues due to lack of health insurance [5,6]. Cultural differences and level of education are contributing factors to diagnostic delay and cancer disparity, specifically in the African American population [7,8]. Moreover CRC in African Americans may have different phenotype, age distribution and exposure to risk factors compared to whites [9,10].

Methods

Assess barriers
- Social status
- Economic status
- Transportation

Patient assessment
— Pre-Navigator Pathway

Diagnostics
Treatment

Patient assessment
— Post-Navigator Pathway

Pre-Pathway CRC Patients

Cancer Location	Date of Diagnosis	Surgery Date	Colonoscopy Complete (Yes/No)	Timeframe
Anus Nos	12/18/2011	12/27/2011	12/27/2011	9 d
Colon Cecum	10/20/2011	11/4/2011	11/4/2011	14 d
Anus Nos	3/6/2012	9/20/2011	9/20/2011	6 mo, 14d
Anus Nos	10/4/2011	10/4/2011	10/4/2011	Same day
Appendix	7/13/2011	7/19/2011	7/19/2011	6d
Anus Nos	4/23/2012	12/12/2012	12/2/2012	7 mo, 19d
Colon Cecum	9/3/2009	Feb. 2011	Feb. 2011	~2y, 5 mo
Asc. Colon	5/4/2011	6/3/2011	5/4/2011	1 mo
Asc. Colon	11/16/2010	11/24/2010	11/16/2010	8d
Anus Nos	1/25/2012	6/20/2012	6/20/2012	4 mo, 26d
Anus Nos	4/9/2012	4/9/2012	Never done	Never done
Colon Cecum	8/9/2010	8/9/2010	8/9/2010	Same day
Asc. Colon	2/23/2011	3/15/2011	3/15/2011	22d
Anal Canal	12/14/2010	5/9/2011	5/9/2011	4 mo, 26d
Anus Nos	11/21/2011	11/21/2011	11/21/2011	Same day
Appendix	9/11/2010	9/11/2010	9/11/2010	Same day
Colon Cecum	3/23/2012	3/23/2012	3/23/2012	Same day
Anal Canal	2/19/2009	2/19/2009	2/19/2009	Same day
Anus Nos	9/13/2011	1/30/2012	1/30/2012	4 mo, 17d
Colon Cecum	11/19/2010	11/19/2010	Jan. 2010	~2 mo
Colon Cecum	5/4/2010	7/1/2010	5/14/2010	1 mo, 28d
Asc. Colon	9/25/2012	10/9/2012	9/25/2012	14d
Anus Nos	11/13/2010	11/13/2010	11/13/2010	Same day
Anus Nos	8/1/2012	8/1/2012	8/1/2012	Same day
Anus Nos	8/16/2011	1/27/2012	1/27/2012	4 mo, 11d
Anus Nos	5/9/2012	5/23/2012	5/23/2012	14d
Asc. Colon	12/27/2012	12/27/2012	12/27/2012	Same day
Anus Nos	10/10/2010	10/11/2012	10/11/2012	1d

Table 2. CRC patient assessment pre-Navigator Pathway

Colon/Rectal/Anal Pathway

Cancer Location	Date of Diagnosis	Surgery Date	Colonoscopy Complete (Yes/No)	Timeframe
Anal	Unknown	Unknown	Unknown	Unknown
Colon	4/8/2013	4/23/2013	4/23/2013	15d
Colon	4/22/2013	4/25/2013	4/25/2013	3 d
Rectal	4/10/2013	5/17/2013	5/17/2013	1 mo, 7d
Colon	5/6/2013	6/18/2013	6/18/2013	1 mo, 12d
Colon	5/13/2013	5/17/2013	5/17/2013	4d
Colon	6/25/2013	6/25/2013	6/25/2013	Same day
Colon	3/26/2013	3/26/2013	3/26/2013	Same day
Colon	5/30/2013	6/17/2013	6/17/2013	18d
Colon	5/7/2013	5/7/2013	5/7/2013	Same day
Colon	5/16/2013	5/16/2013	5/16/2013	Same day
Colon	6/17/2013	6/24/2013	6/24/2013	7d
Rectal	5/8/2013	5/8/2013	5/8/2013	Same day
Rectal	Unknown	Unknown	Unknown	Unknown

Table 3. CRC patient assessment post-Navigator Pathway

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