Colon Cancer

The Careful Balance of Survival Gains and Cost of Care

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Colon cancer still remains the third leading cause of cancer death for men and women.

The National Cancer Institute (NCI) set estimates for colon cancer at 102,900 new cases and 51,370 deaths in the United States during 2010.[1] However, there are glimmers of hope since new colon cancer cases are down almost 4% since 2006, and deaths from the disease are down 7% in that same time period.[2] Most notably, colon cancer is the most preventable cancer and, with aggressive, consistent screening and early stage intervention, can be cured.

Staging clearly plays a significant role in the colon cancer prognosis. Table 1 provides a statistical summary of NCI data on percentage of cases diagnosed by stage, with the corresponding five-year relative colon cancer survival rates.[3]

Survival benefits have been obtained through the use of novel chemotherapy regimens and the entrance of targeted therapies that can provide a more predictable outcome for specific eligible patients. Although colon cancer may not be managed care's highest priority based on volume of patients, the cost of treating colon cancer on a per-patient basis can be significant, especially in later stages of the disease.

Table 1. Stage and Survival

Colon Cancer Stage	Percentage of Cases Diagnosed by Stage	Percentage Achieving Five-Year Survival
Localized (confined to the primary area)	39%	90%
Regional (spread to regional lymph nodes, or beyond the primary site)	37%	70%
Distant (metastasized)	19%	12%
Unknown/Unstaged	5%	38%

In addition, cancer screening initiatives continue to diagnose patients earlier while they are still under commercial insurance. As a result, all payors (whether government or commercial) are taking a closer look at ensuring appropriate utilization for higher-cost chemotherapy, biologics, and targeted monoclonal antibodies.

BIOMARKERS: PINPOINTING PATIENT SELECTION

Acceptance of biomarkers as a means to establish patient selection has grown significantly in the medical community since 2009. For a managed care plan, the use of biomarkers has become a valuable way to help manage the concerns on inappropriate utilization of high-cost biologics.

The *KRAS* biomarker is one such example that is specific to colon cancer. Analyzing *KRAS* mutation within a colon tumor can determine response/nonresponse to targeted biologics. The drive toward payor coverage of the *KRAS* mutation occurred only after evidence of robust published trial data, coupled with parameters established by oncology guidelines and technology assessment organizations. Examples of reports, assessments, or published guidance that support utilization of the *KRAS* biomarker include those outlined in Table 2.

As of December 2010, research conducted with 35 managed care plans across the United States[8] showed that 31 plans had formal published policies stipulating Erbitux (cetuximab) or Vectibix (panitumumab) coverage only for those patients who are *KRAS*-negative, using policy wording similar to the following[9]:

"KRAS mutation analysis meets the definition of medical necessity to predict nonresponse to anti-EGFR monoclonal antibodies cetuximab and panitumumab in the treatment of metastatic colorectal cancer."

In contrast, despite the fact that most late-stage colon cancer patients may be covered by Medicare benefits, only a select few Medicare contractors have specific local coverage determinations for oncology drugs and biologics, and even fewer contractors indicating *KRAS* mutation analysis requirements for the targeted therapies. Medicare contractors may change this coverage development position as they become more involved in evidence-based approaches for coverage decisions.

DRUGS AND BIOLOGICS: THE VALUE EQUATION

The National Comprehensive Cancer Network's (NCCN's) Colon Cancer Guidelines,[10] commonly used as an important reference for assessment of clinical treatment decisions, outline several regimens to treat stage II and III, as well as advanced/metastatic colon cancer, including such treatments as:

- FOLFOX*
- FOLFIRI^

Both as standard dosing regimens, or +/- such biologics as bevacizumab, cetuximab, or panitumumab

- 5-fluorouracil/leucovorin
- capecitabine +/- bevacizumab

* FOLFOX includes treatment with folinic acid (FOL), fluorouracil (F), and oxaliplatin (OX).
^ FOLFIRI includes treatment with folinic acid (FOL), fluorouracil (F), and irinotecan (IRI).

Payors recognize the potential for improving the quality of care and outcomes for patients with colon cancer, and the value of adding certain treatment options. However, there is a need to balance cost of care and benefit to patients, especially when considering the addition of high-cost targeted biologic therapies to current standard regimens that are relatively less costly.

The trend for managed care medical policies/medical management includes more specific criteria for utilization of higher-cost biologics, including such variables as:

Table 2. Support for Utilization of the *KRAS* Biomarker

Organization	Assessment/Report Title	Dates of Publication
Blue Cross Blue Shield Technology Evaluation Center (BCBSTEC)	*KRAS* mutations and epidermal growth factor receptor inhibitor therapy in metastatic colorectal cancer[4]	2008, 2009
American Society of Clinical Oncology (ASCO)	American Society of Clinical Oncology provisional clinical opinion: testing for *KRAS* gene mutations in patients with metastatic colorectal carcinoma to predict response to antiepidermal growth factor receptor monoclonal antibody therapy[5]	2009
National Comprehensive Cancer Network (NCCN) – NCCN Guidelines™	Colon cancer guidelines[6]	2009, 2010, 2011
Agency for Healthcare Research and Quality (AHRQ)	Systematic reviews on selected pharmacogenetic tests for cancer treatments: CYP2D6 for tamoxifen in breast cancer, *KRAS* for anti-EGFR antibodies in colorectal cancer, and BCR-ABL1 for tyrosine kinase inhibitors in chronic myeloid leukemia[7]	2010

1. International Classification of Diseases – Ninth Revision, Clinical Modification (ICD-9 CM) diagnosis code edits
2. Covered, acceptable drug combinations, based on clinical data (e.g., "use with a 5-fluorouracil-based chemotherapy treatment")
3. Line of therapy limitations (e.g., "in patients refractory to irinotecan therapy")
4. Specific dosing limits and frequency of dosing
5. Administration (utilization management) through specialty pharmacy mechanisms

FROM PATHWAYS TO PAYMENTS: THE NEXT STEPS

Based on 2010 research regarding payor integration of oncology cost management, an estimated 20% of payors were confirmed as currently using some form of clinical pathway. Approaches ranged from applying basic NCCN guidelines and treatment plan management to comprehensive target tumor/stage-of-disease pathways with payment assigned to compliance levels.[11] By 2012, the estimate for incorporating such mechanisms as pathways is anticipated to grow to 40%. In all cases where pathways are currently in place, colon cancer is one of the top four primary tumor targets, based on cost of care.

In terms of payment evolution, United Healthcare's current episode of care payment pilot model is perhaps the most transparent at this time, with a test of payments based on actual drug costs plus a case management fee. However, other payors and pathway organizations also are looking to potential episode of care models as a next step in utilization management. Medicare is also approaching episode-of-care payment across multiple care models (not necessarily oncology specific) by establishing a Medicare Shared Savings demonstration program for accountable care organizations (ACOs), which will encourage high-quality and efficient service delivery.[12] Oncology practices are already positioning themselves to establish oncology medical homes or ACO models to take advantage of the Medicare Shared Savings approach.

EPILOGUE: TIPPING THE BALANCE TO THE POSITIVE

Colon cancer cost of care is a necessary focus for payors and providers as is the case for any higher-cost disease state. However, through the use of biomarkers and evidence-based medical policies, clinical pathways, and novel payment structures, management of utilization can be achieved without creating obstacles to patient access.

As a closing thought on balancing survival gains vs. cost of care, keep in your sights that colon cancer is the most preventable cancer. March is National Colon Cancer Awareness Month, offering a collaborative opportunity for payor and oncology provider communities to establish colon cancer prevention outreach.

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