THE FUTURE OF BIOMARKERS

DIGITAL PATIENT ENGAGEMENT; Hsp90 INHIBITORS

EMERGING TECHNOLOGIES PIPELINE

SPOTLIGHT ON RITUXIMAB & MORE…
Solid Tumor Agents Dominate the Future of Biomarkers
Biomarkers, genetic tests, and personalized oncology represent the future of oncology and the pipeline. With biomarkers and their diagnostic counterparts dominating clinical research activities, Campbell Alliance digs into the pipeline and analyzes why they think solid tumor biomarkers will provide more fertile ground with biomarker research than hematologic tumors.

After an Eventful 2011, What’s in the Pipeline for Emerging Technologies in Oncology?
2011 was a great year because some of the more talked-about products in the oncology pipeline moved into commercialization. But what compounds are being talked about now that we’ll be seeing hit the market in the next couple of years? Kantar Health provides us with an overview of the more important strategies, targets, and compounds offering hope in the oncology pipeline with a focus on unmet needs and niche indications.

Spotlight on Cost of Cancer Care: Rituximab
The cost of cancer care is driven by several factors, one of which is the volume of generic drugs being prescribed. IntrinsiQ, LLC examines Rituximab use in several cancer types to understand trends in cost of cancer care.

The Use of Hsp90 Inhibitors in the Treatment of Lung Cancer
There are so many pathways and mutations being exploited in R&D, and yet there are a few that seem to generate more enthusiasm than others. Heat shock protein 90 is one of those targets that has generated numerous trials and compounds, especially for the treatment of lung cancer. We are fortunate to have Dr. Suresh S. Ramalingam, Associate Professor, Director of Medical Oncology, Emory University, provide an overview of the current clinical trials involved in the development of Hsp90 inhibitors.

Digital Patient Engagement: Next Steps in the Provider-Patient Relationship
What could be more important to the delivery of quality cancer care than the provider-patient relationship? We all recognize how important this is, and even the government has incentivized improving this relationship with the HITECH Act. Contributor Navigating Cancer, reveals the results of a survey on cancer patients that helps define successful patient engagement, and discusses the role of patient portals at oncology practices.
One of the more primary goals of the HITECH (Health Information Technology for Economic and Clinical Health) Act is to improve the healthcare of all Americans through an unprecedented investment in information technology (IT). By digitizing medicine, HITECH intends, among other things, to vastly improve the patient-provider relationship through providing incentives to healthcare professionals to adopt electronic health records (EHRs). By investing in oncology-specific EHRs and patient portals, oncologists can better access patient information, better facilitate patient engagement, and better educate patients so they can take a more active role in making decisions regarding their own healthcare.

A more patient-centered approach is at the crux of today’s healthcare needs as evidenced by the ongoing discussions of Accountable Care Organizations (ACO), Medical Home Models, and the new American College of Surgeons Commission on Cancer (CoC) Standards. They are all requiring more patient-centered care, which will enhance the patient-provider relationship in the coming years through increasing patient engagement.

**Defining Patient Engagement**

The Center for Advancing Health—a healthcare research organization—defines patient engagement “as actions individuals must take to obtain the greatest benefit from the healthcare services available to them.” The organization has identified 10 key patient engagement behaviors that individuals must take in order to obtain the greatest benefit. Behaviors such as communicating with healthcare professionals, organizing care, seeking health knowledge, making informed treatment decisions, and being more actively involved with their treatment are all included.

Moreover, a study by Kidney Cancer Canada among patients with advanced kidney cancer and their caregivers found that greater patient engagement results in a better quality of life. In addition, Gallup—a market research organization—found that patient engagement was powerfully linked to a healthcare provider’s financial performance. Gallup identifies patient engagement as the central characteristics of the emotional connections between healthcare providers and their best (most compliant) patients. According to the organization, “these patients are not just ‘satisfied’ or ‘loyal’ to their healthcare provider; they are emotionally attached to the provider’s brands or services.”

For oncology providers, facilitating patient engagement and developing deeper patient relationships are quickly becoming requirements to better patient care. Today, patient engagement starts with patients obtaining electronic access to their health information and specific patient educational needs; but with the next stages of Meaningful Use, Medical Home and ACO Models, and Commission on Cancer standards, patient engagement will evolve to providing navigation programs, survivorship programs, online secure messaging, electronic self management tools, and surveys that measure patient satisfaction.

The increase of providers implementing EHRs and patient portals is just the start of this progress. In due course, technological solutions will be aiding to support the overall goal of providing better quality care...
in a more cost effective and efficient manner.

**Changing the Patient Engagement Environment From Fractured and Uncoordinated...**

A generation ago, the doctor-patient relationship was very different from what it is today. Healthcare providers were the absolute authority in a patient’s care and patient engagement was limited to staying compliant with a treatment plan. In those days, health information was difficult to find, and treatment options were less personalized.

The Internet has changed all that and today, consumers go online to seek answers to their healthcare questions. For instance, a Pew Research Center survey indicated that 83% of Internet users have gone online to look for health information. Another survey from Pew found that health seekers go online to become informed, prepare for appointments and surgery, to share information, and to seek and provide support. Whether accurate or not, health information is easily gathered from online forums, social media, and other sources such as smart phones and mobile applications. But, with all this information coming from a variety of sources—with variable levels of authority and relevancy independent of a patient’s healthcare team—the patient engagement landscape is fractured and uncoordinated.

Consequently, patients may still often be unaware of what the proper standards of care are for their diagnosis and what the right information is that’s specific to their condition.

...To Connected, Efficient and Measurable

Navigating Cancer recently conducted a survey that included patients with cancer in-treatment or pre-treatment (n=173), which supports the theory that for successful patient engagement to occur, patients need to be connected to their healthcare team, have access to their health information, receive personalized tools and resources specific to their condition, and have it all integrated as part of the provider-patient relationship process. Figure 1 illustrates the most popular topics patients indicated they want integrated into their care. Technology will play a central role in this evolving relationship by enabling oncology providers to engage with patients in an innovative way. The goal is to not just implement technology that will meet federal requirements such as meaningful use, but to adopt IT services that will make an oncology practice more efficient while enhancing the patient-provider relationship.

For example, health IT management systems can create a more efficient experience for patients by automatically delivering personalized patient education materials electronically without any additional workload on practice staff. Northeast Georgia Cancer Care in Athens, Georgia implemented such a patient portal in the fall of 2010. When asked how the new technology has impacted their practice, Loretta Goodson, Northeast Georgia Cancer Care’s Practice Administrator, said “we’re able to deliver a personalized experience to our patients based on their diagnosis right at their first login with no extra work on our part.” This not only gives patients what they want so they can be more engaged in their care, but also meets a HITECH Meaningful Use objective.

Technology can also help engage patients to be active participants in their care by using online tools and mobile applications to track their symptoms and side effects during treatment. In the Navigating Cancer Patient Survey, 80% of respondents said they

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**Figure 1. Most Popular Patient Education Topics**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percent Interested</th>
</tr>
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<tbody>
<tr>
<td>Experiences from Others</td>
<td>85</td>
</tr>
<tr>
<td>Treatment Options</td>
<td>75</td>
</tr>
<tr>
<td>How to Prevent Recurrence</td>
<td>65</td>
</tr>
<tr>
<td>How to Manage Side Effects</td>
<td>55</td>
</tr>
<tr>
<td>Nutrition</td>
<td>45</td>
</tr>
</tbody>
</table>

Source: Navigating Cancer Patient Survey (n=173)
were interested or very interested in learning how to manage side effects⁵ (Fig. 1). Over half said they were interested in recording their symptoms and side effects during treatment in an online health journal (Fig. 2).

This is a key element of emerging ACO and Medical Home pilot programs, where payers are looking for opportunities to reduce costs while delivering better quality care. A 2008 study by the University of North Carolina showed that 63% of cancer patients who visited the emergency room were admitted vs 15% for the general population.⁶ With online tools, oncologists can have real-time access to patient information and be automatically alerted when interventions may be necessary to better manage side effects, which could help avoid these costly hospitalizations.

The Center for Cancer & Blood Disorders in Fort Worth, Texas implemented such a patient portal in the spring of 2011. Tammy Chambers, Director of Contracting at CCBD, noted “as we talk to payers about ACO and Medical Home pilot programs, our patient portal is part of that conversation as a tool for monitoring and reporting on symptoms and side effects during treatment.”

In addition to connecting patients with their healthcare team, technology can also connect patients with their family, friends, other like patients and survivors. Instead of creating profiles and support networks on multiple external websites, oncology practices can facilitate cancer-specific social networks through their own patient portals; thereby using and developing their own brand and creating awareness that brings with it a strong, positive impression with patients and their extended support networks.

Managing the New Patient-Provider Relationship

With new innovative portals such as these, the digital wall between patients and providers is coming down, and as it falls, it impacts how patients and providers will interact with each other. As new programs and systems are implemented, health IT management systems can assist providers with managing patient communications while measuring program participation (Fig. 3).

The Centers for Medicare & Medicaid Services (CMS) recently established two new reimbursement codes for cancer treatment planning and care coordination. This will allow providers to be reimbursed for the time and expertise they dedicate to programs such as patient navigation and survivorship, which are now accreditation requirements by the new Commission on Cancer Standards.⁷

Additionally, oncologists can engage patients with cancer-specific educational materials and tools under the practice’s brand, thus having more control over the accuracy and relevancy of information.
patients receive. Technology can automate many of these functions, leading to better outcomes and more satisfied patients, which leads to a stronger affinity with the practices brand, and thus, patient engagement. In the future, when e-consults are more clearly defined and reimbursable, more patient engagement will shift online, saving patients and providers time without sacrificing quality of care.

**In Conclusion**

Healthcare reform is in its early stages of implementation, and increased patient engagement is the direction the healthcare system is moving. Increasingly, patients are becoming more engaged in their healthcare decision making, and getting more comfortable with accessing online technology to do so. The opportunity for oncologists now is to make their practices more efficient so they can enhance their provider-patient relationships and increase better quality care, while ensuring they have the flexibility to take advantage of new patient engagement opportunities.

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1. New Study Shows Patient Advocacy Leads to Better Care, Treatment and Quality of Life, http://www.digitaljournal.com/pr/55163
7. Commission on Cancer Care. www.facs.org

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**About the Contributor**

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