MY CANCER GENOME®
GENETICALLY INFORMED CANCER MEDICINE

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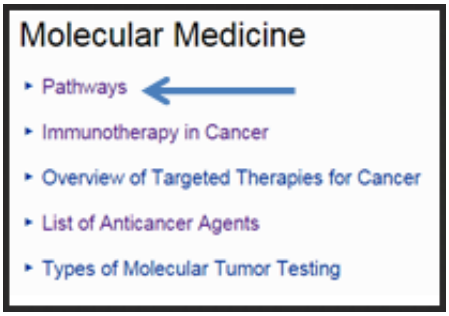

As targeted therapy strategies in cancer treatment become more pathway-based, My Cancer Genome has launched a new content section Pathways accessible from the Molecular Medicine menu on the homepage of My Cancer Genome. In this section, information on 20 cancer-relevant cell signaling pathways is covered. As part of this new content section, each pathway page displays information about each pathway's function, activators, inhibitors, and cellular outputs.

For each pathway, the content is accompanied by a pathway figure that includes a pathway summary describing the components of the pathway, diseases in which the pathway is aberrantly activated, and a drug list. Pathway content will continue to be updated and expanded to include additional cancer-relevant cell signaling pathways.

Shown below is an example of one of the pathway figures for the PI3K-AKT1-MTOR signaling pathway.

May/June 2014 MCG Newsletter

April 2014 MCG Newsletter

March 2014 MCG Newsletter

Feb 2014 MCG Newsletter

Nov/Dec 2013 MCG Newsletter

Oct 2013 MCG Newsletter

Sept 2013 MCG Newsletter

August 2013 MCG Newsletter

July 2013 MCG Newsletter

June 2013 MCG Newsletter

May 2013 MCG Newsletter

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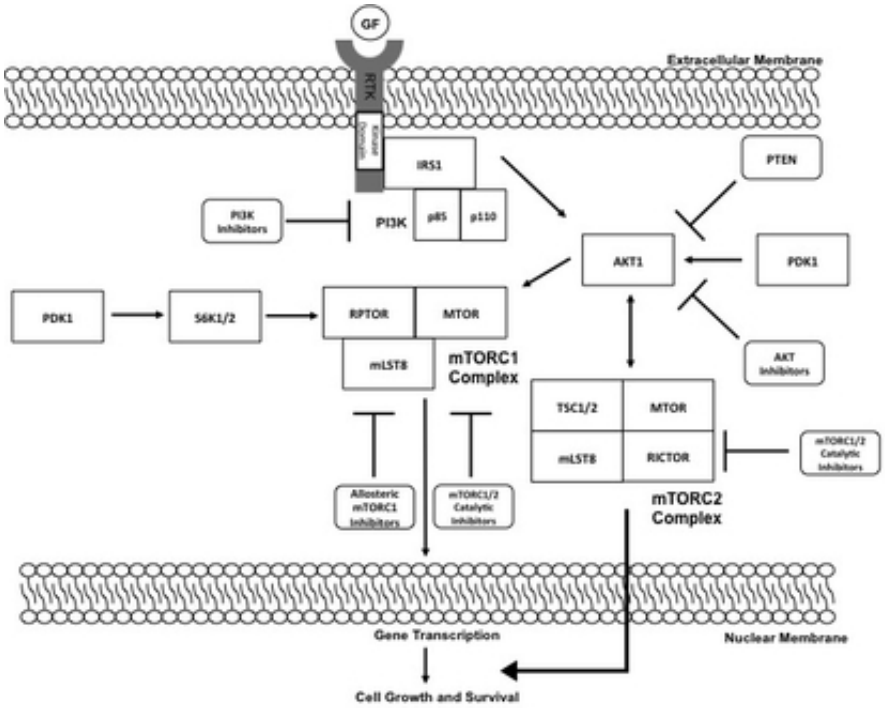

In addition to this new content section, My Cancer Genome has also added content for 587 new genes to the site, expanding on the gene content associated with diseases and variants. The new gene content can be accessed from the site map. This new set of pages brings the total number of gene pages to 699. The addition of the new Pathways pages and Gene pages brings the total number of site pages to 1,317.

My Cancer Genome News: Second Phase of Educational Project Launched

The My Cancer Genome team, in conjunction with the Knowledge Management team, has launched the second phase of the Pfizer Independent Grant for Learning & Change (IGL&C). In this phase of the project, entitled "Learning style assessment in healthcare professionals to address knowledge gaps around novel treatment strategies to overcome resistance to endocrine therapy in ER+ breast cancer," healthcare professionals around the country have been reviewing seven different types of learning materials. These materials have been developed to educate participants about the basic science and recent clinical trials involving CDK4/6 inhibitors in ER+ breast cancer. In conjunction with the learning materials, a set of breast cancer pages on My Cancer Genome has been updated, including Molecular Profiling in Breast Cancer, ESR1, ESR1 in Breast Cancer, and ER (ESR1) Expression in Breast Cancer.

Two new drug class in disease pages have also been created: MTOR Inhibition and MTOR Inhibitors in Breast Cancer and CDK4/CDK6 Inhibition and CDK4/CDK6 Inhibitors in Breast Cancer. These pages link to more detailed information about the MTOR inhibitor everolimus and the CDK4/6

inhibitors palbociclib, ribociclib, and abemaciclib, including current development status and clinical trial tables. The overall goal of the study is to evaluate effectiveness of educational materials on a topical concept geared towards healthcare professionals' preferred method of learning.

My Cancer Genome Content: Immunotherapy Updates

At the 2015 ASCO Annual meeting, improvements in efficacy of immune-based therapies in several tumor types were reported. The preliminary results of a randomized phase III trial comparing the PD-1 inhibitor nivolumab with the CTLA4-inhibitor ipilimumab in metastatic melanoma supported benefit with nivolumab (Wolchok et al. 2015). This data is consistent with recently reported results from a Phase III trial comparing the PD-1 inhibitor pembrolizumab with ipilimumab in metastatic melanoma (Robert et al. 2015).

Following preliminary results reported at ASCO, several new tumor types will be added to the Immunotherapy in Cancer page for PD-1 inhibitors. Clinical data for efficacy of PD-1 inhibitors in squamous non-small cell lung cancer (Spigel et al. 2015), small cell lung cancer (Antonia et al. 2015; Ott et al. 2015), hepatocellular carcinoma (El-Khoueiry et al. 2015), head and neck cancer (Seiwert et al. 2015; Chow et al. 2015), and bladder cancer (Plimack et al. 2015) will be summarized.

The PD-L1 inhibitor MPDL3280, recently given the proposed international nonproprietary (INN) designation atezolizumab, has been tested in a phase I trial of patients with metastatic urothelial bladder cancer (Powles et al. 2014). Updated response and efficacy data were reported at ASCO 2015 and will be added to the current bladder cancer section (Petrylak et al.