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MARY CROWLEY CANCER RESEARCH CENTERS’ PHONE APP

Mary Crowley Cancer Research Centers is launching a novel PHONE APP that streamlines the process of connecting and qualifying a cancer patient to an active cancer clinical trial. The launch of the APPLE© APP will be January 1, 2014. Unique features of the APP include:

- Selection of a research option by MOLECULAR TARGET as well as by disease type
- Push Notification of any changes or updates to the listing of options
- Ability to CALL a LIVE Clinical Research Coordinator to discuss a trial or refer a patient
- Ability to TEXT OR EMAIL the Clinical Research Coordinator
- FREE

The APP was developed by Mary Crowley to improve patient access and so that physicians and patients will have important clinical trial information at their fingertips and enhance the patient referral process. This personalized adaptation is consistent with the personalized approach that has been at the forefront of the research conducted at Mary Crowley for over 20 years. The ability to view a clinical trial by molecular target is not only cutting-edge but is driven by the center’s patient centric mission, where every patient is an individual with a unique molecular blueprint. By focusing on molecular and cellular changes that are specific to cancer, investigational targeted cancer therapies may be more effective than other types of treatment, including chemotherapy and radiotherapy, and less harmful to normal cells.
**Updates:**

**Fort Worth TOPA Opens FANG™ Ovarian Trial**

Oncologists at Texas Oncology in Fort Worth are poised to enroll ovarian cancer patients to the Mary Crowley investigational Phase II FANG™ vaccine trial. Dr. Kenneth Hancock will be the Principal Investigator for the research trial. Additionally, Dr. Noelle Cloven and Dr. Reagan Street will be Sub-Investigators. Texas Oncology in Fort Worth will be collaborating with Baylor - All Saints Hospital so that a portion of the patients tumor tissue may be transferred to a bio-technology company for the *personalized* vaccine manufacturing. Dr. Hancock says, “we feel fortunate to have this additional option for our patients”.

**Mary Crowley Goes Electronic**

Our world has been radically transformed by digital technology and so has Mary Crowley. The research center has just completed the transfer from paper patient charts to an electronic version called iKnowMed (IKM). With an electronic medical record available whenever and wherever it is needed, the benefits far outweigh a paper record. The new database provides the opportunity for:

- More expedient referrals and patient enrollment to trials
- Faster updates to referring physicians
- Real time access by research team for clinical reporting
- Integration of laboratory results for more effective tracking
- More effective compilation of clinical trial data to pharmaceutical sponsors

**Big Pharma Pipeline/Small Molecules and Protein Therapies**

As a result of exciting new progress in our understanding of cancer-driving genes, cancer signaling pathways, and cancer immune evasion mechanisms, the pharmaceutical industry has restructured the therapy development pipeline, hopefully leading to new and more effective cancer treatments with fewer side effects. These primarily consist of small molecules and protein therapies zeroing-in on the molecules identified in an individual patient’s cancer, enabled by new, approved technologies. Examples are the FDA approved small molecule, Vemurafenib, targeting the melanoma BRAF gene mutation and the Yervoy antibody that improves the anti-cancer immune response. Already in the pipeline are new therapies to block resistance that generally develops to these agents. Mary Crowley has been and remains involved in offering these opportunities to patients. In addition to this “hedgehog” approach isolating one or two big targets, Mary Crowley continues to explore combined therapies incorporating direct attack on cancer-driving genes and multiple signal pathways along with immunotherapy; like the fox with a wide variety of approaches in one package. ~Neil Senzer M.D., Scientific Director of Mary Crowley

**From Dallas to Japan**

Dr. John Nemunaitis was an invited guest speaker for the 19th Annual Meeting of the Japan Society of Gene Therapy (JSGT) to discuss gene based vaccines. The meeting was held July 4-6, 2013 at the Okayama Convention Center, Okayama-City, Japan.

**Boomers Need Better Way to Sift Cancer Data**

Government advisors say U.S. is facing a crisis in how to deliver cancer care, as baby boomers reach their tumor-prone years and doctors have a hard time keeping up with complex new treatments. Older adults account for just over half of the 1.6 million cases diagnosed in 2012. By 2030, new diagnoses are expected to reach 2.3 million as the population ages. Increasingly, scientists are finding genetic differences inside tumors that help explain why one person’s cancer is more aggressive than another’s. That also means certain cancer drugs will work for a particular kind of cancer in one person but not the next. "If your doctor doesn’t know that, or your hospital doesn’t do the test, you don’t have that opportunity” for newer, targeted therapies, says Dr. Patricia Ganz, a cancer specialist at the University of California, Los Angeles. ~ Lauren Neergaard, The Associated Press
BIG HOPE 1 IN NEW ORLEANS
The Big Easy rolled out the pink carpet for the BIG HOPE 1 Barge on July 27, 2013, at the nearby Audubon Aquarium. The 125 guests were surrounded by aquariums of exotic fish and represented individuals from every facet of the barge industry. They came together to support Pushing Hope, an initiative created by Ceres Barge Line in 2012, to further cancer research. The jazz band, led by Patrick Smith, was the definite and lively headliner of the evening. Mary Crowley has been the recipient of the funds that are directed to patients in need of innovative cancer research trials. This event raised $85,000 and combined with the 2012 proceeds, BIG HOPE 1 has raised approximately $325,000 for Mary Crowley!

AMERICAN ELECTRICAL POWER (AEP) GENERATES FOR BIG HOPE 1
The barge division of American Electrical Power is making waves for cancer research. Mary Crowley was invited to Kirkwood, Missouri on August 17, 2013, to attend their annual employee golf and softball tournament. The company pledges proceeds of the celebration to charity and encouraged by BIG HOPE 1, Mary Crowley was selected to receive a portion of the funds that netted $21,000. Ceres Barge Line was one of the competing softball teams to raise funds and were a “home run” in pink uniforms!

MARY CROWLEY AWARDED $60,000
The W.B. & Ellen Gordon Stuart Trust – Cancer Fund awarded a grant to Mary Crowley on July 23, 2013, in the amount of $60,000 to support the center’s Innovative Clinical Trial Development Program. This grant will enable Mary Crowley to open more innovative and personalized clinical trials for waiting patients. In turn, the findings derived from these trials will advance our research to identify and study more genetic signals and their role in cancer growth. The Stuart Trust-Cancer Fund is a non-profit, private foundation headquartered in Milwaukee, Wisconsin. To learn more about the Innovative Clinical Trial Program or become a sponsor for the program, please contact Ellen Dearman at 214-658-1975. For information about our science, please visit our website at www.marycrowley.org.

ANGELS IN TROPICAL SHIRTS
Members and friends of the Cedar Creek Lake Parrot Head Club (www.cclphc.org) gathered on September 21, 2013 for the annual Angels in Tropical Shirts Cancer (AITS) Benefit to honor friends and families battling cancer. This year’s music festival was in memory of long-time friend Ben Wynne, who lost his battle with cancer in July 2013, and to raise money for the purchase of new “smart” infusion pumps for Mary Crowley. A donation of $10,500 was raised for the center. Anita and Kelly Brown created AITS to make a difference in the fight against cancer. www.angelsintropicalshirts.com

For more updates and more information on these events, visit our website: www.marycrowley.org and click on “Events”
Clinical Trials: Best Option for Advanced Hepatocellular Cancer

The Institute of Medicine (IOM), The National Comprehensive Cancer Network, and leading cancer care providers agree, the best care for a patient diagnosed with cancer is on a clinical trial\(^1\). A case in point is that, patients with advanced Hepatocellular cancer have limited FDA approved therapeutic options with sorafenib being the only FDA approved therapy. Mary Crowley offers the following Hepatocellular clinical trials that incorporate a variety of mechanisms designed to attack the cancer. They are summarized below:

- **Trial #12-19: G-202** is a cytotoxic analog which is engineered to bind specifically to PSMA. The toxin, thapsigargin, that is coupled to this masking peptide inhibits biologic activity at the tumor site, which leads to apoptosis or cell death.
  
  Dr. Nemunaitis: "G 202 is a novel molecular targeted experimental opportunity which has demonstrated encouraging pre-clinical anti-cancer effect thereby justifying this FDA directed clinical trial option at Mary Crowley."

- **Trial #13-01: SGI110** is a hypomethylating agent, whose active metabolite is decitabine. SGI110 is resistant to modification by cytidine deaminase, a common pathway of decitabine metabolism.
  
  Dr. Nemunaitis: "The methylating effect can be tracked while the patient is under investigation thereby allowing us clinicians to correlate potential benefit to mechanisms of SGI110."

- **Trial #09-17: FANG™** is personalized autologous tumor immunotherapy. It is constructed with GMCSF and bifunctional RNA targeting furin knockdown. As such, three mechanisms of anti-tumor immunotherapy are induced concurrently.
  
  Dr. Nemunaitis: "FANG™ is the first DNA based tri-plex immunotherapy to advance to Phase II testing under FDA oversight."

- **Trial #13-10: XL184** exhibits cancer inhibitory activity against multiple tyrosine kinase receptors. Those being; MET, VEGFR2/KDR, RET, KIT, FLT3 and AXL. Treatment with XL184 results in antiangiogenic effects, with disruption of the vasculature and association with pro-apoptotic effects.
  
  Dr. Nemunaitis: "Tolerability of XL184 has been remarkable given the broad molecule signal inhibitory effect."

\(^1\) IOM. A National Cancer Clinical Trials System for the 21st Century: Reinvigorating the NCI Cooperative Group Program; 2010.