Lenvatinib Improves Survival in Thyroid Cancer Patients

PHILADELPHIA – The drug lenvatinib can significantly improve overall survival rates in a group of thyroid cancer patients whose disease is resistant to standard radioiodine treatment, according to new research from the Perelman School of Medicine at the University of Pennsylvania. The study, published today in the Journal of Clinical Oncology, is the first to show lenvatinib has a definitive impact on overall survival (OS). Researchers found OS improves in patients older than 65 years of age and that the drug is well-tolerated.

“Due to limitations of study design, it has been hard to prove that multikinase inhibitors improve overall survival, although we have suspected it,” said the study’s lead author Marcia Brose, MD, PhD, an associate professor of Otorhinolaryngology and a member of Penn’s Abramson Cancer Center. “These findings put that doubt to rest for the group of patients over 65 treated with lenvatinib.”

Most cases of differentiated thyroid cancer (DTC) are treated with radioiodine therapy. Since the thyroid absorbs nearly all of the iodine in the human body, radioactive iodine given to a patient will concentrate in thyroid cancer cells, killing them with little effect on the rest of the body. The treatment can be curative, but about 15 percent of DTC patients have cancers that are resistant to the therapy.

Lenvatinib is one of two first-line therapies approved by the U.S. Food and Drug Administration for patients who are resistant to radioiodine treatment. The drug is a multi-kinase inhibitor (MKI) – meaning it targets the specific enzymes that are required for growth in DTC.

“It was approved based on previous trials that showed it had a benefit for progression-free survival, but until now, nobody has shown it also has a benefit for overall survival,” Brose said.

Brose and her team participated in the SELECT trial to study the effects of levatinib on DTC, and Brose directed the further analysis published in

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Study Sheds New Light on Inherited Testicular Cancer Risk

PHILADELPHIA – An analysis of data from five major studies of testicular cancer has identified new genetic locations that could be susceptible to inherited testicular germ cell tumors. The findings, which researchers call a success story for genome mapping, could help doctors understand which men are at the highest risk of developing the disease and signal them to screen those patients.

Researchers from The international TESticular CAncer Consortium (TECAC), led by Katherine L. Nathanson, MD, a professor of Translational Medicine and Human Genetics at the Perelman School of Medicine at the University of Pennsylvania and a member of Penn’s Abramson Cancer Center, worked with multiple institutions to perform the analysis. The findings were published today in Nature Genetics.

Germ cell tumors account for 95 percent of testicular cancer cases. Testicular germ cell tumors are the most common cancer in the United States and Europe in white men between the ages of 20 and 39, and the number of cases has continued to rise over the past 20 years. Despite significant evidence that susceptibility to these tumors is hereditary, no one has been able to find a mutant high penetrance gene – similar to BRCA1 in breast cancer – that increases risk.

In contrast, genome-wide association studies (GWAS), which identify common variations associated with risk of disease, have been much more successful. Nathanson and her team used that method for this analysis to find locations on chromosomes – called loci – that contain variants associated with an increased risk of germ cell tumors. They combined data from five international GWAS of testicular germ cell tumors, giving them almost 3,600 total cases.

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Lenvatinib

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this report which specifically looked at OS and safety of lenvatinib in younger and older patients. Patients were divided into two groups: Those 65 or younger, and those older than 65. The median age of the younger group was 56. For the older group, it was 71. Each group contained patients on the drug and patients receiving a placebo.

Researchers found significant differences in overall survival between those on the drug and those on the placebo in the older age group. Among the older cohort, those on the placebo had an OS of 18.4 months. For patients receiving the drug, OS was not reached, but confidence intervals show the expected survival would exceed 22 months. In the younger cohort, overall survival was not reached for either group.

“There’s a belief that these drugs should be withheld from older patients due to concerns about toxicity and other medical concerns, but our results show just the opposite,” Brose said. “Not only do older patients benefit from these drugs, but they generally tolerate them well.”

Brose says the results of this study can have an immediate impact in clinical care, and several other studies are ongoing to find new uses for lenvatinib in other types of thyroid cancer.

Source: Penn Medicine Communications
John Infanti, john.infanti@uphs.upenn.edu

Study Sheds New Light on Inherited Testicular Cancer Risk

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“With this analysis, we’ve identified eight new loci in previously unknown regions” Nathanson said. “We’ve also found four new loci in previously identified regions.”

Nathanson is a co-senior author on the study, along with Peter A. Kanetsky, PhD, MPH, of Moffitt Cancer Center. The paper’s lead author is Zhaoming Wang, who worked at the National Cancer Institute under the direction of Stephen J. Chanock, MD.

Nathanson noted the identification of new loci in this study is not just a matter of statistical significance. These new loci are also biologically relevant, suggesting specific pathways are disrupted – particularly those involved in the development, maturation, and function of male germ cells.

“Compared to other cancer types, we have accounted for a high proportion of site-specific heritability with fewer loci,” Nathanson said.

With the 12 new loci identified in this study, the number of known loci now stands at 40. When taken altogether, Nathanson says it can explain 37 percent of the father-to-son familial risk for testicular cancer.

“Even though this cancer is curable, it shows how much we still have to learn about this particular disease type,” Nathanson said. “These findings can guide us when trying to determine which patients are at a high risk of developing disease and who among them should be screened.”

Nathanson says identifying who needs screening may be especially useful for men known to be at increased risk for testicular cancer for other reasons, such as undescended testes.

The study was funded by the National Cancer Institute’s Clinical Genetics Branch Familial Testicular Cancer Project (NCI 02-C-0178, NCT-00039598). TECAC is supported by the National Institutes of Health (U01CA164947). The Penn genome-wide association study was supported by the National Institute of Health (CA114478).

Source: Penn Medicine Communications
John Infanti, john.infanti@uphs.upenn.edu
Seminars and So Forth

Monday 6/19/17  12:00 pm
CDB/Epigenetics Seminar Series
"Chromatin determinants for centromere inheritance and strength." Ben E. Black, PhD, Associate Professor of Biochemistry and Biophysics, PSOM
Gaulton Auditorium, BRB II/III

Monday 6/19/17  1:00 pm
CHOP Normal & Malignant Hematopoiesis RAG Seminar Series
"Protecting the genome by homologous recombination." Maria Jasin, PhD, Developmental Biologist Department of Developmental Biology, Memorial Sloan Kettering Cancer Center
CTRB 1200A (CHOP)

Tuesday 6/20/17  9:00 am—4:30 pm
Noreen O’Neill Melanoma Research Symposium
"Melanoma: Advances in Therapy and Biology." Click here to learn more and to register.
Wistar Institute, 36th and Spruce Sts.

Tuesday 6/20/17  4:00 pm
CHOP CCCR Seminar Series
Senior Fellows Research Presentations
"An Epidemiologic Study of Rasbuncause Use in Pediatric Malignancies" - Rebecca Citrin, MD & "Comparative Effectiveness of Different Strategies for Monitoring Neonates on Extra Corporeal membrane Oxygenation" - Aditi Kamdar, MD
CTRB 1100A (CHOP)

Thursday 6/22/17  12:00 pm
Radiation Oncology Invited Speaker Seminar
"Development of HDACi for GBM Radiotherapy." Kevin A. Camphausen, MD, Chief, Radiation Oncology Branch; Senior Investigator; Head, Imaging and Molecular Therapeutics Section, NCI Center for Cancer Research
SCTR 8-146AB

Thursday 6/22/17  12:00 pm
Illumina: Advances in Genome Science
"The Future of Oncology: The Value of Comprehensive Genomic Tumor Profiling." This presentation by Illumina will focus on comprehensive tumor profiling in today’s oncology. RSVP to hjguerrer@illumina.com for lunch.
Seminars Rm. 253, BRB II/III

Monday 6/26/17  12:00 pm
Pathology & Laboratory Medicine Grand Rounds
Anil K. Rustgi, MD, T. Grier Miller Professor; Chief, Division of Gastroenterology, PSOM
CRB Austrian Auditorium

Tricia Bruning Receives NADDCO Service Award

Tricia Bruning, CFRE, Senior Executive Director & Principal Gifts Officer at University of Pennsylvania’s Abramson Cancer Center, was presented with the 2017 Lisa Considine Service Award at the annual conference of the National Association of Cancer Center Development Officers (NACCDO). The award honors a member of the NACCDO community who has exhibited dedication, commitment, professionalism, and service to NACCDO—as well as to his/her profession and institution.

Tricia exemplifies what the Considine Award stands for and her dedication and commitment extend to her career at Penn, her service to her profession and her family and friends. Tricia has held numerous leadership roles within NACCDO and provided valuable mentorship to many.

Congratulations, Tricia!

Source: ACC Development Office
Funding Opportunities

ACC and Center of Excellence in Environmental Toxicology - Smoking Machine Pilot Studies

Deadline: July 1, 2017

The Abramson Cancer Center’s Tobacco and Environmental Carcinogenesis (TEC) Program, with co-funding from the Center of Excellence in Environmental Toxicology (CEET), is soliciting proposals for pilot studies that utilize the TEC program’s Vitrocell Smoking Machine for in vitro studies of tobacco smoke and aerosol (for more information, please see: http://www.vitrocell.com/Portals/0/information-center/downloads/leaflets/vitrocell-vc-10-smoking-robots.pdf). This device can be used to mimic human tobacco smoking behavior, deliver first and second hand tobacco smoke to human cells and lung slices, used with combustible and e-cigarettes, and used to assess cytotoxic and genotoxic end-points.

TEC and CEET will commit to supporting an award for $40,000 in direct costs. The funding will be allocated for 1 year and is expected to provide the support needed to conduct pilot studies that would, in turn, serve as preliminary data for an R01-type grant application. Investigators at all faculty levels are welcome to apply. Applications will be evaluated for scientific impact and innovation, experimental rigor, and the potential to generate external funding. Applications that have collaborations across ACC programs are particularly encouraged.

For complete application details, contact Jennifer McGuire at rjen@upenn.edu

RFA-CA-17-030 HIV/AIDS and the Tumor Niche (R01)

LOI Due Date: 30 days before application due date

Application Due Date: August 7, 2017

The purpose of this Funding Opportunity Announcement (FOA) is to advance our understanding of the role of the tumor niche or microenvironment in the risks, development, progression, diagnosis, and treatment of cancer observed in individuals with an underlying HIV infection or Acquired Immune Deficiency Syndrome (AIDS).