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“Genetic Differences Increase Risk for Painful Nerve Damage in Children Receiving Common Anti-Cancer Medication”

TEASE RUNS: 05 (technician walking with chemotherapy drug)

Does genetics play a role when it comes to the side effects of a common chemotherapy drug? That’s next.

JAMA 3970

TRT: 2:04

EMBARGO: 11a.m. (ET) Tuesday, February 24, 2015

INTRO: Acute lymphoblastic leukemia (A-L-L) has a cure rate of more than 85 percent. However, one of the main medications used to treat this cancer can cause painful and sometimes debilitating nerve damage. These side effects can persist long after treatment has stopped. A new study examined whether differences in an inherited gene is associated with an increased risk of developing these side effects. Catherine Dolf explains in this week’s JAMA Report.

VIDEO	AUDIO
B-ROLL Chemotherapy drug being transported from pharmacy, graphic of A-L-L	INSIDE THIS PLASTIC POUCH, IS A LIFESAVING CHEMOTHERAPY DRUG ON ITS WAY TO A YOUNG PATIENT DIAGNOSED WITH ACUTE LYMPHOBLASTIC LEUKEMIA OR A-L-L, THE MOST COMMON TYPE OF CHILDHOOD CANCER.
SOT/FULL Kristine R. Crews, Pharm.D., - St. Jude Children’s Research Hospital Super@:11 Runs:10	“Vincristine is a very powerful chemotherapy agent but it has a terrible toxicity that’s called neuropathy. Some children get very weak in their ankles and their feet and need support to walk.”

(Video covering middle of bite: physical therapist working on Hannah's feet)	
NATSO/FULL Runs:04	"...as best you can get that heel out ok..."
B-ROLL Hannah walking with physical therapist	18 YEAR-OLD HANNAH TATE DEVELOPED THIS DEBILITATING SIDE EFFECT AFTER BEING TREATED WITH VINCRISTINE FOR ANOTHER TYPE OF CANCER.
SOT/FULL Hannah Tate - Cancer Patient Super@:37 Runs:05 (Video covering 1 st half of bite: Hannah walking)	"First I noticed it in my feet. They were just weak, they kind a dropped, like I couldn't pull my feet up, it's really hard."
SOT/FULL William E. Evans, Pharm.D., - St. Jude Children's Research Hospital Super@:42 Runs:05	"We had some hints that there could be a genetic component to the risk of developing this toxicity."
B-ROLL Dr. Evans and Dr. Crews walking down hospital hallway, talking with co-authors, doctor looking into microscope, slides, cu of hand on microscope, pan of doctors talking	DOCTORS WILLIAM EVANS AND KRISTINE CREWS FROM THE ST. JUDE CHILDREN'S RESEARCH HOSPITAL AND CO-AUTHORS EXAMINED A LARGE PANEL OF GENES IN MORE THAN 300 CHILDREN WITH A-L-L. THEY ALL RECEIVED MULTIPLE COURSES OF THE ANTI-CANCER DRUG, VINCRISTINE, OVER AN EXTENDED PERIOD OF TIME.
SOT/FULL Kristine R. Crews, Pharm.D., - St. Jude Children's Research Hospital Super@1:03 Runs:08	"We found that a change in this gene, CEP72, made patients more at risk for developing the side effect to vincristine."
GXF FULL JAMA COVER	THE STUDY APPEARS IN JAMA, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
SOT/FULL William E. Evans, Pharm.D., - St. Jude Children's Research Hospital Super@1:15 Runs:14 (Video covering middle of bite: doctor looking into microscope)	"They have over a three times greater risk of developing this side effect of vincristine and it's more severe when they do develop it, over twice as severe. Not only are their neurons more sensitive, therefore they get more toxicity, but their leukemia cells are more sensitive."
B-ROLL Doctors talking in lab	RESEARCHERS ARE HOPING TO USE THIS INFORMATION TO HELP REDUCE THOSE SIDE EFFECTS. FUTURE STUDIES ARE PLANNED.

SOT/FULL William E. Evans, Pharm.D., - St. Jude Children's Research Hospital Super@1:35 Runs:09	"To see if we can lower the dose of vincristine in those children, reduce their toxicity without compromising the success of their leukemia therapy."
B-ROLL Hannah working with physical therapist, braces on legs	HANNAH'S DOCTORS SAY SHE IS MAKING GREAT PROGRESS. SHE NOW HAS BRACES FOR HER LEGS, MAKING IT EASIER FOR HER TO WALK AND SHE IS LOOKING FORWARD TO GRADUATING HIGH SCHOOL THIS YEAR.
SOT/FULL Hannah Tate - Cancer Patient Super@1:53 Runs:08 (Video covering bite: Hannah working with therapist)	"I'm really excited about being finished with all of this. Hopefully next I'll figure out what I want to do in college."
B-ROLL Hannah doing exercises	CATHERINE DOLF, THE JAMA REPORT.

TAG: THIS GENE VARIANT IS PRESENT IN ABOUT 16 PERCENT OF PATIENTS DIAGNOSED AND TREATED FOR A-L-L.

Please see the complete study for additional information, including other authors, author contributions and affiliations, financial disclosures, funding and support, etc.

TO CONTACT: Dr. William Evans and Dr. Kristine Crews call: Carrie Strehlau (901) 595-2295

ADDITIONAL SOUNDBITES:

William E. Evans, Pharm.D., - St. Jude Children's Research Hospital

QUOTE 1 Runs:10

"We were looking for a signal, if you will, in the genome of the children that were developing the toxicity that would be different than what were seeing in kids who did not develop the toxicity."

Kristine R. Crews, Pharm.D., - St. Jude Children's Research Hospital

QUOTE 1 Runs:12

"This study and its findings is an important first step in understanding which patients are at risk for developing the side effect to vincristine and also in planning steps for how to manage that risk."

