Medical Xpress

International team reveals first prognosticator of survival in aggressive cancer

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The tumor suppressor gene pRb2/p130 may provide the first independent prognostic biomarker in cases of soft tissue sarcoma (STS), according to an international collaboration of researchers, including scientists at the Sbarro Institute for Cancer Research and Molecular Medicine at the College of Science and Technology at Temple University in Philadelphia, PA, the Department of Human Pathology and Oncology, University of Siena and the Center of Oncological Research of Mercogliano (CROM) in Avellino, Italy.

The research appears in the latest issue of *Clinical Cancer Research* (www.aacrjournals.org).

The findings show that a reduction in the expression of pRb2/p130 can mean a higher risk of recurrence and death from STSs. The gene pRb2/p130, a member of the retinoblastoma family of genes, regulates a portion of the cell cycle.

Clinicians have long sought a prognostic test for the disease, which can be highly aggressive and unpredictable, making it difficult to determine the most beneficial course of chemotherapy and/or radiation treatments following surgery.

A prognostic indicator will help doctors determine which patients have a higher risk of recurrence of the disease and who might benefit from a

more aggressive adjuvant therapy.

In the study, researchers examined specimens taken from 41 patients with STS. In a subset of 31 cases of nonmetastatic cancers, they found a direct relationship between pRb2/p130 expression and the clinical outcome of patients.

"We found that pRb2/p130 expression was lost or decreased and significantly correlated with recurrence of disease and poor survival rates in the subset of patients with nonmetastatic tumors," said Valeria Masciullo, M.D., Ph.D., lead author of the study.

"A prognostic test could define the natural history of STSs, while also helping to identify possible targets for new kinds of therapies," said Antonio Giordano, M.D., Ph.D., the Director of the Sbarro Institute, Professor of Molecular Biology at the College of Science and Technology at Temple University in Philadelphia, PA and Full Professor of Pathological Anatomy and Histology of the University of Siena.

The researchers noted that the reliability of pRb2/p130 as a potential marker in the clinical routine assessment and management of patients with STS deserves to be further evaluated in long-term follow-up studies on a larger number of cases.

Source: Sbarro Health Research Organization