

## **Prognostic Impacts of Hypoxic Markers in Soft Tissue Sarcoma**

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**Background:** We aimed to explore the prognostic impact of the hypoxia induced factors (HIF $\alpha$ s) 1-2, the metabolic HIF-regulated glucose transporter GLUT-1 and carbonic anhydrase IX (CAIX) in non-gastrointestinal stromal tumor soft tissue sarcomas (non-GIST STS).

**Methods:** Duplicate cores with viable tumor tissue from 206 patients with non-GIST STS were obtained and tissue microarrays were constructed. Immunohistochemistry (IHC) was used to evaluate expression of hypoxic markers.

**Results:** In univariable analyses, GLUT-1 ( $P < 0.001$ ) and HIF-2 $\alpha$  ( $P = 0.032$ ) expression correlated significantly with a poor disease-specific survival (DSS). In the multivariate analysis, however, only high expression of GLUT-1 (HR 1.7, CI 95% 1.1 – 2.7,  $P = 0.021$ ) was a significant independent prognostic indicator of poor DSS.

**Interpretation:** GLUT-1 is a significant independent negative prognostic factor in non-GIST STS.