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# Expression of embryonic lethal abnormal vision (ELAV)-like protein HuR and cyclooxygenase-2 (COX-2) in Ewing sarcoma

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ABSTRACT

**Aims and background.** HuR is a member of the family of ELAV (embryonic lethal abnormal vision)-like proteins that stabilize several cellular mRNAs by binding to AU-rich elements in the 3' untranslated region of the mRNA. Cyclooxygenase-2 (COX-2) is a well known enzyme that promotes tumor growth and metastasis. Recent studies have shown that HuR can stabilize the mRNA of COX-2, and cytoplasmic expression of HuR is associated with increased COX-2 expression in some cancers. The aim of this study was to investigate the correlation between COX-2 and HuR in Ewing sarcoma.

**Methods.** The expression patterns for HuR and COX-2 were assessed via immunochemical analysis of 70 Ewing sarcoma samples.

**Results.** Nuclear HuR expression was observed in 12 of 70 (17.1%) cases, but cytoplasmic expression was not observed. COX-2 expression was seen in 25 of 70 (35.7%) samples. Nuclear HuR and COX-2 were simultaneously expressed in 8 of 70 (11.4%) samples. The expression of nuclear HuR was significantly associated with COX-2 expression ($P = 0.014$). Neither HuR nor COX-2 expression showed a correlation with age or sex.

**Conclusions.** COX-2 expression in Ewing sarcoma may not be directly related to mRNA stabilization by HuR. However, a correlation between COX-2 expression and nuclear HuR expression through indirect mRNA stabilization can be suggested.

***Key words:*** *Ewing sarcoma, COX-2, HuR, ELAV-like protein.*

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