



<b>Evento</b>	Salão UFRGS 2022: SIC - XXXIV SALÃO DE INICIAÇÃO CIENTÍFICA DA UFRGS
<b>Ano</b>	2022
<b>Local</b>	Campus Centro - UFRGS
<b>Título</b>	IS GRP78 (Glucose-Regulated Protein 78) a prognostic biomarker in differents types of cancer? A systematic review and meta-analysis
<b>Autor</b>	NATÁLIA SOUZA DOS SANTOS
<b>Orientador</b>	FERNANDA VISIOLI

**Justification:** The GRP78 expression and protein levels are increased in several types of cancer. It is related to tumor proliferation and aggressiveness, according to in vitro data. GRP78 can bind to caspases, inhibiting their activation, which makes cells more resistant to cell death. The overexpression of GRP78 in cancer cells indicates that this chaperone may be an excellent prognostic biomarker in different types of cancer. **Aim:** This systematic review aimed to evaluate GRP78 expression in different types of cancer and whether it is related to poor survival and prognosis outcomes. **Methodology:** this review was conducted according to PRISMA guidelines and was registered at PROSPERO (CRD42021241801). PubMed, Embase, Scopus, and Lilacs databases were used to search for studies with human cancer tissue samples, where GRP78 immunohistochemical analysis was performed, correlating its levels with clinical, histological and prognostic parameters. For quantitative analysis and meta-analysis, two outcomes were evaluated: GRP78 levels in cancer tissues compared to control tissue and overall survival (OS) according to GRP78 levels (high versus low). The WebPlotDigitizer was used to read the Kaplan Meier curves to extract the total number of events and the survival rates at 3- and 5-years follow-up time intervals. **Results:** After the selection process was conducted by two independent investigators, a total of 98 manuscripts were included. In 62% of the studies, GRP78 was associated with a worse prognosis, such as tumor grade, tumor stage, lymph node or distant metastasis, recurrence, chemoresistance, and radioresistance. A meta-analysis included 29 studies that detected a significantly higher expression of GRP78 in cancer tissues (RR= 2.2, 95% CI 2.02 - 2.40) compared to control. A meta-analysis of 3 and 5-year Overall Survival revealed an increased risk of death for tumors with high expression of GRP78 (RR=1.36, 95%CI 1.16-1,59, I2= 57%) and (RR=1.65, 95%CI 1.22-2.21, I2=64%), respectively.