

## 学位論文審査結果の要旨

所 属	三重大学大学院医学系研究科 甲 生命医科学専攻 臨床医学系講座 乳腺外科学分野	氏 名	にのみや(ひがし) ちひろ 二宮(東) 千尋
審 査 委 員	主 査 渡邊 昌俊 副 査 高尾 仁二 副 査 間山 裕二		
<p>(学位論文審査結果の要旨)</p> <p><b>Ganglioside GD2 Expression Is Associated With Unfavorable Prognosis in Early Triple-negative Breast Cancer</b></p> <p>【主論文審査結果の要旨】</p> <p>著者らは論文において下記の内容を述べている。</p> <p><b>Background/aim:</b> Gangliosides (acidic glycosphingolipids) have crucial regulatory roles in normal physiological processes, as well as in pathological conditions, including tumor onset and progression. GD2 is highly expressed in triple-negative breast cancer (TNBC), particularly in cancer stem cells. However, little is known on the clinical impact of GD2 expression on the prognosis of TNBC. Consequently, we aimed to investigate the association between GD2 expression in TNBC and the prognosis of TNBC.</p> <p><b>Patients and methods:</b> We assessed GD2 expression in 76 patients with primary TNBC who had undergone surgery at our Institute between 2012 and 2015 using immunohistochemical analysis with a tissue microarray technique. We investigated the relationship between GD2 expression and clinicopathological factors in TNBC, recurrence-free survival (RFS), and overall survival (OS).</p> <p><b>Results:</b> Increased GD2 expression was observed in 45% of TNBC patients. There was no significant association between GD2 expression and clinicopathological factors in TNBC. The 5-year RFS rate among patients with GD2-positive TNBCs was significantly worse than that among patients with GD2-negative TNBCs (75.4% and 94.9%; HR=4.931; 95%CI=1.024-23.752; p=0.027). The OS in patients with GD2-positive TNBCs tended to be inferior to that of patients with</p>			

GD2-negative TNBCs (HR=5.357; 95%CI=0.599-47.939; p=0.092). Interestingly, in patients with GD2-positive TNBCs, a higher grade of tumor-infiltrating lymphocytes (TILs) displayed a significantly better impact on OS (TILs-high vs. TILs-low; p=0.04). Both univariate and multivariate analyses showed that GD2 expression negatively affected RFS (p=0.027, p=0.021, respectively).

**Conclusion:** GD2 expression is an independent unfavorable prognostic factor for TNBC.

トリプルネガティブ乳がん(TNBC)において GD2 発現が予後不良因子となることを示した論文であり、学術上極めて有益であり、学位論文として価値あるものと認めた。

Anticancer Research; 43(9): 4045-4053

Published: 30th August 2023

doi:10.21873/anticancerres.16593

CHIHIRO HIGASHI, KANAKO SAITO, YUJI KOZUKA, HIROTO YUASA, KAHO NAKAMURA, MAKOTO ISHITOBI, MIKIYA ISHIHARA, TOSHIRO MIZUNO, ISAO TAWARA, HIROSHI FUJIWARA and TOMOKO OGAWA