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Clinical Impact of Tumor DNA Repair Expression and T-cell Infiltration in Breast Cancers
Andrew R. Green, Mohammed A. Aleskandarany, Reem Ali, Eleanor Grace Hodgson, Suha Atabani, Karen De Souza, Emad A. Rakha, Jan O. Ellis, and Srinivasan Madhusudan

This study provides clinical evidence that the interplay between DNA repair, CD8+ T cells, and expression of PD-L1 and PD-1 can promote aggressive tumor phenotypes. XRCC1-directed personalization of immune checkpoint inhibitor therapy may be feasible in breast cancer.

RESEARCH ARTICLES

292 Induction of NKG2D Ligands on Solid Tumors Requires Tumor-Specific CD8+ T Cells and Histone Acetyltransferases
Jiemiao Hu, Chantale Bernatchez, Liangfang Zhang, Xueqing Xia, Eugenie S. Kleinerman, Mien-Chie Hung, Patrick Hwu, and Shulin Li

NKG2D-mediated immune surveillance is crucial for inhibiting tumor growth and metastases, but tumors often downregulate NKG2D ligands. A therapeutic strategy to restore tumor-specific expression of NKG2D ligands on solid tumors was developed that induced tumor regression and increased survival.

300 Comprehensive Meta-analysis of Key Immune-Related Adverse Events from CTLA-4 and PD-1/PD-L1 Inhibitors in Cancer Patients

A meta-analysis of immune checkpoint therapies showed a small but significant increase in the risk of developing key immune-related adverse events of any grade, as well as selected high-grade gastrointestinal and liver toxicities.

312 Clinical Impact of Tumor DNA Repair Expression and T-cell Infiltration in Breast Cancers
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Serine Proteases Enhance Immunogenic Antigen Presentation on Lung Cancer Cells


Lung cancer cells exposed to granulocyte serine proteases increased the presentation of both endogenous peptides and the exogenous, protease-derived, HLA-A2–restricted PR1 peptide. Circulating CTLs specific for these peptides were identified in lung cancer patients.

Promoter Methylation Modulates Indoleamine 2,3-Dioxygenase 1 Induction by Activated T Cells in Human Breast Cancers

Satish K. Noonepalle, Franklin Gu, Eun-Joon Lee, Jeong-Hyon Choi, Gheath Alatrash, Samir Hanash, and Jeffrey J. Molldrem

Triple-negative breast cancers (TNBCs) are often infiltrated by T cells. These tumors counteract T-cell activity through hypomethylated IDO1 promoters and increased IDO1 expression in response to IFNγ, providing a rationale for treatment of TNBC with IDO inhibitors.