**EVALUATING THE RISK OF HYDROCHLOROTHIAZIDE AND ACE INHIBITOR EXPOSURE AND CUTANEOUS MALIGNANT NEOPLASM**

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**BACKGROUND:** The purpose of this study is to assess the effects of using hydrochlorothiazide (HCTZ) and angiotensin-converting enzyme inhibitors (ACEIs), alone and in combination, and the risk of developing cutaneous malignant neoplasm (CMN).

**METHODS:** The study was conducted through a HIPAA compliant national database in the United States between 2010 and 2018, retrospectively reviewed using diagnostic codes for CMN and generic drug codes for ACEIs and HCTZ. Access to the database was granted by Holy Cross Health, Fort Lauderdale, for the purpose of academic research. Standard statistical tests were used.

**RESULTS:** The query yielded 1,375,562 patients, with 436,377 taking these antihypertensives and 939,185 that were not. CMN occurred in the antihypertensive-consuming population with an incidence of 4,327 (0.99%) and occurred in the control population with an incidence of 6,210 (0.66%). The difference was statistically significant with χ² p=2.2x10-16 and logistic regression odds ratio (OR) = 1.48 (95% CI, 1.42-1.55). Patients taking HCTZ and ACEIs together have an increased risk of developing cutaneous malignant neoplasm that is statically significant.

**CONCLUSIONS:** The study shows a statistically significant correlation between both HCTZ and ACEI consumption and development of cutaneous malignant neoplasm. Further investigation is recommended regarding the potential synergistic adverse effects when HCTZ and ACEIs are used together and the development of cutaneous malignant neoplasm.

**CONTENT CATEGORY:** Epidemiology

**KEYWORDS:** *hydrochlorothiazide, ACE inhibitor, skin cancer, malignant neoplasm, cancer risk*