Background: Adrenal gland tumors are sporadic and heterogeneous, with an incidence (excluding childhood neuroblastoma) of 0.05% in the US. Advances in cancer treatment in the last few decades have resulted in increased survival in most paediatric and adult cancer types. The aim here is to report the incidence of adrenal gland tumors as a second primary tumor based on data from the SEER database.

Methods: Data from the Surveillance, Epidemiology, and End Results ‘SEER’ program of the National Cancer Institute, using the SEER*Stat software (version 8.3.2) was obtained. All cancer sites using the Multiple Primary Standardized Incidence Ratios (MP-SIR) session were selected. SEER 13 Regs Research Data from 1992 to 2013 was used.
Results: Data from a total of 2,887,468 persons with cancer were reviewed, 117 of whom had suffered second primary adrenal tumors. One of these patients had two events of adrenal cancer as a second primary, resulting in a total of 118 incidences. The overall standardized incidence ratio (SIR) of adrenal gland tumor as a second primary was 1.49. A high percentage of this event was found in elderly patients, especially those of white race. High incidence of the event was detected in specific primary tumor sites: hypopharynx (O/E = 44.59), stomach (O/E = 4.95), small intestine (O/E = 8.86), liver (O/E = 8.74), breast (O/E = 1.78), kidney and renal pelvis (O/E = 3.19), other endocrine including thymus (O/E = 38.27), nodal NHL (O/E = 3.79), and Chronic Myeloid Leukemia (O/E = 11.15).

Conclusions: Little is available in the literature about adrenal gland tumors as a second primary tumor. Its incidence is high in both white race and elderly cancer survivors in the US. The risk of cancer survivors suffering from a second primary adrenal gland tumor should receive more attention in the US. This would ideally be through follow-up programs at specialized national cancer networks, especially for rare tumors like those of the adrenal gland.

Legal entity responsible for the study: None

Funding: None

Disclosure: All authors have declared no conflicts of interest.