Background

- Hypertension (high blood pressure) is a major problem in America, affecting about 45% of the population and continuing to grow in Asian and European countries.
- Cancer, in 2018 alone, saw 18 million new cases and 9.6 million cancer-related deaths, and these numbers are predicted to continue to rise.

Methods

- Using PubMed, and Embase databases for relative articles from 2014 until present using the following search criteria:
  - (high blood pressure OR hypertension) AND (breast OR renal cell carcinoma/kidney cancer OR prostate cancer OR gastric cancer OR endometrial cancer OR esophagus cancer).
- Hypertension was defined by as either measured, self-reported through a questionnaire, or from medical history and was higher than the cut-off points as described in the cohort and case-controlled studies.
- If an article was measuring metabolic syndrome, only hypertension was evaluated.
- Previous meta-analysis articles and articles found that were published before 2014 were excluded in this study.

Purpose

The aim was to conduct a review and meta-analysis of the data to evaluate the association of hypertension and increased risk of at organ-specific cancer.

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Hypertension has been demonstrated as an independent risk factor of developing organ-specific cancers and has even been shown to increase risk of cancer mortality. Hypertension was identified as sole statistically significant risk factor associated with kidney cancer pathology including increased tumor size, higher tumor grade, in trends toward higher tumor stage and non-clear cell histology.

Discussion

The association is still complex and unclear but evaluating the pathologies between the two would be the next step to understanding these associations to give new insight on how to treat and prevent tumor development and growth.