

## **ELEKTRONİK SİGARA KANSER RİSKİNİ ARTIRIR MI?**

- **2010 verilerine göre yılda 6.3 milyon insan sigara kullanımına bağlı olarak ölmektedir. Sigara ve nikotin endüstrisi batı ülkelerdeki etkin mücadeleyle pazarı bizim gibi gelişmekte olan ülkelere son yıllarda kaydıldılar.**
- **Fakat elektronik sigara yada batı literatüründe e-sigara olarak tanımlanan, yaklaşık 466 marka hızla kullanımında yaygınlaşma mevcut.**
- **İlk kullanımı 1993 yılında başlanan elektronik sigara özellikle son yıllarda hızla yaygınlaşmakta, görüntü, aksesuar ve başka çekici özellikleri ve nikotin barındırması nedeniyle Amerikalı genç nesil arasında kullanımı çok hızlı artmaktadır.**
- **Bu ürünlerde öne sürüldüğü gibi sadece nikotin değil, solvent ve metal artıkları vardır.**

- **Amerika Birleşik Devletlerinde, Pittsburgh üniversitesinde yapılan bir çalışmaya göre elektronik sigara içenler mesane kanseri (idrar torbası) olma riski taşıdıkları belirlendi.**
- **Çalışmaya göre, mesane kanserinin oluşmasından suçlanan, polyaromatic hydrocarbon düzeyi ( 0-toluidine ve 2-naphthylamine) elektronik sigara içenlerde, içmeyen gruba göre yüksek düzeyde bulunmuş.**

**Sonuç: elektronik sigara, sigara bırakmada etkin olmadığı gibi kanser yatığına dair bilgiler giderek artmaktadır.**

**Kaynak:**

Published in [Oncology](#) and  
1 other channel  
News · May 16, 2017

**E-Cigarettes Are Shown to Be Potentially Bladder Carcinogenic**

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May 16, 2017—Boston, Massachusetts—E-cigarette smoke has been shown to contain components that are carcinogenic to urothelial cells.

This finding of a controlled comparison of the urine of nonsmoking e-cigarette users vs nonsmoking nonusers of e-cigarettes by liquid chromatography-mass spectrometry for known bladder carcinogens was reported at the at the 112th Annual Meeting of the American Urological Association (AUA), from May 12 - 16.

Thomas Will Fuller, MD, and Tatum Tarin, MD, of the University of Pittsburgh, Pennsylvania, explained that e-cigarettes are gaining in popularity and have been advertised as a way to deliver the stimulating effects of nicotine without the harmful health risks. Traditional cigarette smoking is a well-established cause of bladder cancer.

Initial studies have shown the composition of e-cigarette liquids to be complex. They may contain nitrosamines, formaldehyde, acrolein, metals, and acetaldehyde, many of which are known bladder carcinogens.

Ninety percent of inhaled nicotine is excreted to urine. Dr. Fuller and colleagues collected urine samples from 13 e-cigarette users and 10 nonsmoking or e-cigarette-using controls. Samples were acidified, hydrolyzed, extracted, dried, and resuspended for analysis by liquid chromatography-mass spectrometry.

Five molecules known to be bladder carcinogens or markers of polyaromatic hydrocarbon exposure present in traditional cigarettes were targeted for analysis. These included benz(a)anthracene, benzo(a)pyrene, 1-hydroxypyrene, o-toluidine, and 2-naphthylamine (limit of detection 1 ng/mL in solvent).

Subjects were predominantly male with a mean age of 39.4 years. All had self-reported abstaining completely from traditional cigarettes for at least 6 months prior to specimen collection.

Levels of o-toluidine and 2-naphthylamine, carcinogenic aromatic amines to the urinary bladder, were significantly higher in e-cigarette users than in nonusers of e-cigarettes (controls). Many subjects who used e-cigarettes were long-term nonsmokers (>12 months). The remaining three tested urinary carcinogens were not identified.

Dr. Fuller concluded that further study is needed to clarify the safety profile of e-cigarettes and their contribution to the development of bladder cancer, given the higher concentration of carcinogenic nitrosamines in the urine of e-cigarette users in this pilot study.

The research underscores the importance of smoking cessation (of both traditional and e-cigarettes) for patients with bladder cancer and those looking to avoid it."