

## Böbrek ve mesane tümörlerinde aşı tedavileri

### Vaccine therapy in kidney and bladder tumors

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#### Özet

Genel olarak aşı tedavisi çeşitli kanserlerin tedavisinde kullanılabilir. Ancak tüm araştırmalara rağmen henüz pek çok kanser türünde başarılı olunamamıştır. Aşı tedavisinin uygulanabilmesi için; kanserin immünojenik olması ve dokuya özgü proteinler içermesi, yavaş ilerlemesi, tedavilerin uygulanabilir olması gereklidir. Bu nedenle, ürolojik kanserler içinde çoğu faz 1/2 ve faz 3 olmak üzere çalışmalar böbrek ve prostat, daha az miktarda da mesane üzerine yoğunlaşmıştır (1,2). Testis kanserlerinde aşı çalışmalarının olmaması hızlı yayılım ve metastaz göstermesi, çeşitli olması ve genellikle mix tümörler halinde izlenmesi, kan-testis bariyerinin olması olarak açıklanabilir.

Aşı tedavisinin kullanımında amaç; tümörün tetiklediği toleransı yenerek, malign hücrelere karşı oluşan immun cevabı aktive etmektir. Bu tedaviler kansere karşı immun cevabı kullanarak etki göstermektedir. Literatür de yayınlanan ilk onkolojik aşı tedavisi 1893 yılında Coley tarafından yayınlanmıştır. Bu çalışmada inoperable yumuşak doku sarkomlarının streptokokal toksinler ile non-spesifik immün cevap oluşturularak regrese olduğu gösterilmiştir (3). Üroonkolojide kullanılan aşilar; tümör hücreleri (otolog ve allojenik), dentritik hücre, DNA viral vektör, protein/peptid, immün düzenleyiciler olmak üzere ana başlıklar halinde sayılabilir (4). Böbrek ve mesane tümörlerinde aşı tedavilerinin uygulanmasına ait geçmiş çalışmalar olmasına rağmen özellikle araştırmalar son dönem de yoğunlaşmıştır.

Biz de bu derlemede üroloji hekimlerinin çok aşına olmadığı, güncel literatür eşliğinde böbrek ve mesane tümörlerinde kullanılan aşı tedavilerinden bahsedeceğiz.

**Anahtar Kelimeler:** böbrek tümörü, mesane kanseri, immünoterapi, aşı tedavisi

#### Abstract

Not every type of cancer is suitable for vaccine therapies. For a vaccine therapy to be implemented, the cancer should be immunogenic and contain tissue specific proteins, should have a slow progression, and treatments should be feasible. For that reason, studies regarding urological cancers, most of which are phase 1/2 and phase 3, are mostly focused on the kidneys and the prostate and less focused on the bladder (1,2). The reason for lack of vaccine studies in testicular cancer can be explained by the fact that it spreads and forms metastases very fast, it has various types and it is mostly seen as mixed tumors, and there is blood-testis barrier.

The aim of implementing vaccine therapy is to activate immune response against malignant cells by overcoming the tolerance triggered by the tumor. These treatments are effective using the immune response against cancer. The first oncological vaccine therapy ever published in the literature belongs to Coley dating back to 1893. In that study it is demonstrated that inoperable soft tissue sarcomas regressed by stimulating non-specific immune response with streptococcal toxins (3). Vaccine therapies used in uro-oncology can be categorized under the following titles; tumor cells (autologous and allogenic), dendritic cell, DNA viral vector, protein/peptide, immune regulators (4). Although there are old studies on the implementation of vaccine therapies in kidney and bladder tumors, researches have only been intensified recently. In this compilation, we will discuss vaccine therapies used in kidney and bladder tumors, which urologists are not so familiar with, in the light of the up-to-date literature.

**Key Words:** kidney cancer, bladder cancer, immunotherapy, vaccine therapy

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