

# Uterine Cancer: A Review of the Current Literature

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**Abstract:** Uterine cancer is the most common gynecologic cancer in developed countries, with over 63,000 new cases diagnosed annually in the United States. The incidence of uterine cancer has been increasing over the past few decades, and it is projected to continue to rise. This review aims to provide an overview of the current understanding of uterine cancer, including its epidemiology, risk factors, pathogenesis, diagnosis, treatment options, and prognosis.

**Keywords:** Uterine cancer, epidemiology, risk factors, pathogenesis, diagnosis, treatment options, prognosis.

## Introduction

Uterine cancer is a heterogeneous disease that accounts for approximately 5% of all female malignancies worldwide. It is typically diagnosed in postmenopausal women, with the majority of cases occurring in women over the age of 50. The exact causes of uterine cancer are unknown, but it is believed to be related to a combination of genetic and hormonal factors.

## Epidemiology

The incidence of uterine cancer has been increasing over the past few decades, with a 25% increase in diagnoses between 1999 and 2014. In the United States, uterine cancer is the most common gynecologic cancer, accounting for approximately 12% of all gynecologic cancers.

## Risk Factors

Several risk factors have been identified as contributing to the development of uterine cancer, including:

- \* Obesity
- \* Physical inactivity
- \* Hormone replacement therapy (HRT)
- \* Family history
- \* Genetic mutations (e.g. Lynch syndrome)
- \* Endometrial hyperplasia

## Pathogenesis

Uterine cancer is thought to arise from the endometrium, the lining of the uterus. The exact pathogenesis is not fully understood, but it is believed to involve a combination of genetic and epigenetic alterations.

## Diagnosis

The diagnosis of uterine cancer typically involves a combination of clinical evaluation, imaging studies (e.g. ultrasound), and histopathological examination.

## Treatment Options

Treatment options for uterine cancer depend on the stage and grade of the tumor, as well as the patient's overall health. Treatment for uterine cancer depends on the stage and grade of the cancer, as well as the patient's overall health. The primary treatment options for uterine cancer are:

1. Surgery: Surgery is the most common treatment for uterine cancer. The type of surgery depends on the stage and location of the cancer.

\* Total hysterectomy: Removal of the uterus and cervix.

\* Radical hysterectomy: Removal of the uterus, cervix, and surrounding tissue.

\* Laparoscopic-assisted vaginal hysterectomy (LAVH): A minimally invasive procedure that uses a laparoscope to remove the uterus through the vagina.

2. Chemotherapy: Chemotherapy is often used in combination with surgery or radiation therapy. It is effective in treating advanced or recurrent uterine cancer.

\* Systemic chemotherapy: Medications are taken orally or intravenously to target cancer cells throughout the body.

\* Regional chemotherapy: Medications are delivered directly to the pelvis or abdomen to target cancer cells in these areas.

3. Radiation therapy: Radiation therapy is used to kill cancer cells or prevent their growth.

\* External beam radiation therapy (EBRT): High-energy rays are directed from outside the body to the tumor.

\* Brachytherapy: A radioactive source is placed inside the vagina or cervix to deliver radiation directly to the tumor.

4. Targeted therapy: Targeted therapy is a type of treatment that targets specific genes, proteins, or pathways involved in the growth and spread of cancer.

\* CDK4/6 inhibitors: Medications that target the CDK4/6 pathway, which is important for cell division and growth.

\* PARP inhibitors: Medications that target the PARP pathway, which is involved in DNA repair and cell survival.

5. Immunotherapy: Immunotherapy is a type of treatment that uses the body's immune system to fight cancer.

\* Checkpoint inhibitors: Medications that release brakes on the immune system, allowing it to attack cancer cells more effectively.

6. Hormonal therapy: Hormonal therapy is used to treat uterine cancer that is sensitive to hormones, such as estrogen and progesterone.

\* Hormone-blocking medications: Medications that block estrogen and progesterone receptors, reducing their effect on cancer cells.

The choice of treatment depends on various factors, including:

\* Stage and grade of the cancer

\* Patient age and overall health

\* Presence of certain genetic mutations

\* Patient preferences

It's essential to consult with a healthcare provider to determine the best course of treatment for uterine cancer.

## Prognosis

The prognosis for women with uterine cancer depends on the stage and grade of the tumor at diagnosis. Women with early-stage disease have a good prognosis, with a 5-year survival rate of approximately 80%. However, women with advanced-stage disease have a poorer prognosis, with a 5-year survival rate of approximately 20%.

## Conclusion

Uterine cancer is a complex and heterogeneous disease that requires a comprehensive understanding of its epidemiology, risk factors, pathogenesis, diagnosis, treatment options, and prognosis. Further research is needed to improve our understanding of this disease and to develop more effective treatments for women affected by it.

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