# Outcomes of Patients with Endometrial Cancer in Ain Shams University Maternity Hospital

Thesis

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# *Abbreviations*

| | |
|---|---|
| **ACOG** | American College of Obstetricians and Gynecologists |
| **AEH** | Atypical endometrial hyperplasia |
| **AH** | Abdominal hysterectomy |
| **ASTEC** | A Study in the Treatment of Endometrial Cancer |
| **BT** | Brachytherapy |
| **CAH** | Complex atypical hyperplasia |
| **CH** | Complex hyperplasia |
| **EBRT** | External beam radiotherapy |
| **EEC** | Endometrioid endometrial cancer |
| **EEC** | Endometrioid endometrial cancer |
| **EIC** | Endometrial intraepithelial carcinoma |
| **FIGO** | International Federation of Gynecology and Obstetrics |
| **GOG** | Gynecology oncology group |
| **HCV** | Hepatitis c virus |
| **HLRCC** | Hereditary leiomyomatosis and renal cell carcinoma |
| **HNPCC** | Hereditary nonpolyposis colorectal cancer |
| **IHD** | Ischemic heart disease |
| **LCF** | Liver cell failure |
| **MRC** | The Medical Research Council |
| **NCCC** | Comprehensive Cancer Center |
| **NEEC** | Non-endometrioid endometrial cancer |
| **OS** | Overall survival |
| **PORTEC** | Postoperative radiotherapy for endometrial cancer |
| **RFS** | Recurrence free survival |
| **RT** | Radiation therapy |
| **SAH** | Simple atypical hyperplasia |
| **SEER** | Surveillance, Epidemiology and End Results (SEER) national cancer database |
| **SH** | Simple hyperplasia |
| **SIS** | Saline infusion sonohysterography |
| **TVS** | Transvaginal ultrasound |
| **VH** | Vaginal hysterectomy |
| **VHD** | Ventricular heart disease |
| **WHO** | World Health Organization |

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# *Introduction*

Endometrial cancer is the fourth most common cancer in women and the most common gynecologic malignancy, accounting for 6% of all female cancers. The American cancer society estimated 43,470 new cases and 7,950 deaths from endometrial cancer in 2010 ***(Pant and Bristow, 2011)***.

There appear to be two types of endometrial carcinoma: one, which is estrogen related, and one, which is not. Factors associated with estrogen-related endometrial carcinoma include: obesity, diabetes mellitus, hypertension, nulliparity, infertility, endogenous or exogenous estrogen, tamoxifen use and precursor lesions such as endometrial hyperplasia. These cancers are diagnosed early and have a good prognosis. Non estrogen-related endometrial carcinoma tends to be seen more often in older, non-obese, parous women and tends to be more aggressive ***(Moffitt and Muderspach, 2010)***.

Endometrial cancer can present as post-menopausal bleeding (PMB), persistent post-menopausal vaginal discharge due Pyometra or significant worsening in menstrual pattern or volume in pre-menopausal women. Presentation as a result of metastatic disease is uncommon and pain is generally not a feature. Most women (~90%) present with PMB. Approximately 10% of women with PMB will be diagnosed with endometrial cancer***(Holland, 2010)***.

The recommended initial investigation is a trans-vaginal ultrasound scan for measurement of endometrial thickness and identification of ovarian masses. A thin endometrium (<5 mm) in the post-menopausal woman has a high negative predictive value for endometrial cancer and is reassuring***(Holland, 2010)*.**

A definitive diagnosis in PMB is made by histology. Historically endometrial samples have been obtained by dilatation and curettage. Nowadays it is more usual to obtain a sample by biopsy, which can be undertaken using samplers. All methods of sampling the endometrium will miss some cancers. Hysteroscopy and biopsy is the preferred diagnostic technique ***(Symonds, 2003).***

The initial management of endometrial cancer was a total abdominal hysterectomy, bilateral salpingo oophorectomy and pelvic and para aortic node dissection. Post-surgical treatment was then based on features detected at the time of surgery ***(Mutch, 2009)***.

Postoperatively, all patients with deep myometrial invasion or a poorly differentiated cancer should have consideration for adjunctive therapy, which may include radiation, hormone therapy or chemotherapy ***(Moffitt and Muderspach, 2010)***.

Adjuvant Radiation can be delivered externally to the pelvis, as vaginal brachytherapy, or as a combination. Treatment can also be directed to the whole abdomen or to an extended field that includes the pelvis and para-aortic region. Indications for radiotherapy are generally in the adjuvant setting. The goal of adjuvant radiotherapy is to treat the pelvic lymph-node regions that might contain microscopic disease, as well as the central pelvic region including the upper vagina**.** Progestagens have been the cornerstone of hormonal treatment of metastatic endometrial cancer, and response is related to the presence of steroid hormone receptors***(Amant et al, 2005).***

Cytotoxic chemotherapy has no proven role in the management of early stage endometrial cancer but is used in patients with primary advanced or recurrent endometrial cancer. Many agents have been studied in the treatment of endometrial cancer, but few have shown significant single-agent activity. The most active single agents are doxorubicin and cisplatin, which give response rates of 20–40%***(Oehler et al, 2005).***

The overall prognosis for endometrial cancer is generally good and reflects early presentation of the disease in most cases. The 5-year survival rate for all stages is approximately 80%but varies with tumor grade and depth of myometrial invasion. Survival in stage I disease is 85-90% but then falls to approximately 70-75% for stage II, 45% for stage III and <30% for stage IV disease. Other factors that adversely affect prognosis include non-endometrioid histological sub-type and lymphovascular space invasion. Most endometrial cancer recurrences occur within the first 3 years after treatment. Follow-up is undertaken with the aim of detecting recurrence and identifying side-effects of treatment***(Holland, 2010)***.

# *Aim of the Work*

The aim of this study is to review patient's characteristics and to evaluate the survival estimates and treatment outcomes of patients with endometrial cancer managed at Gynecologic Oncology Unit, Ain Shams University in the period between Jan. 2000 and Dec. 2010.

# *Materials and methods*

The study will be carried out at the Gynecologic Oncology Unit, Ain Shams University Maternity Hospital. It is a retrospective study that will include patients with endometrial cancer managed between Jan. 2000 and Dec.2010. The patient's case notes will be retrieved and the relevant data will be collected. Missing data will be completed by information obtained from the patients themselves or their relatives through phone calls or by post.

**The data will include:**

- Age.
- Residence.
- Occupation.
- Special habits if found.
- Phone number and/or postal address.
- Body mass index.
- Menstrual history:
  - Age at menarche.
  - Age at menopause.
- Marital status:
  - Married.
  - Not married.
  - Duration of marriage.
- Parity
- Contraceptive history:
  - Methods used.
  - Duration of use.
- Comorbid risk factors:

- Diabetes mellitus.
- Hypertension.
- Obesity.
- Chronic anovulatory states →PCO.
- Endometrial hyperplasia.
- Estrogen replacement without concomitant progesterone

- Past history of:
  - Chronic medical problems
  - Other malignancies
- Presenting symptom:
  - Bleeding
  - Discharge
  - Swelling
  - Pain
  - Accidentally discovered
  - others
- Date and age of diagnosis.
- Investigation done and its results.
- Method of obtaining the preoperative endometrial biopsy
- Preoperative histological type and grade
- Surgical procedure.
- Lymphadenectomy: yes or no If yes,
  - Pelvic lymphadenectomy
  - Preaortic lymphadenectomy
  - Or both
  - Number of nodes collected
- Post-operative histological type and tumor grade
- Surgical stage
- Operative or postoperative complications

- Adjuvant therapy:
- Radiation therapy:
  - Type
  - Number of cycles
  - Response
  - Duration of therapy till completed
- Chemotherapy:
  - Type
  - Number of cycles
  - Response
  - Duration of therapy till completed
- Follow up data
- Tumor recurrence
  - Date and time torecurrence.
  - Site of recurrence.
  - Treatment of recurrence
- Survival data:
  - Overall survival
  - Disease free survival
- Date of death
- Cause of death
  - Cancer or treatmentrelated.
  - Non cancer related.