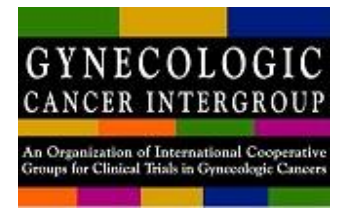




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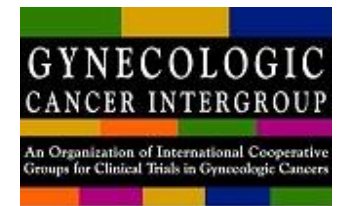
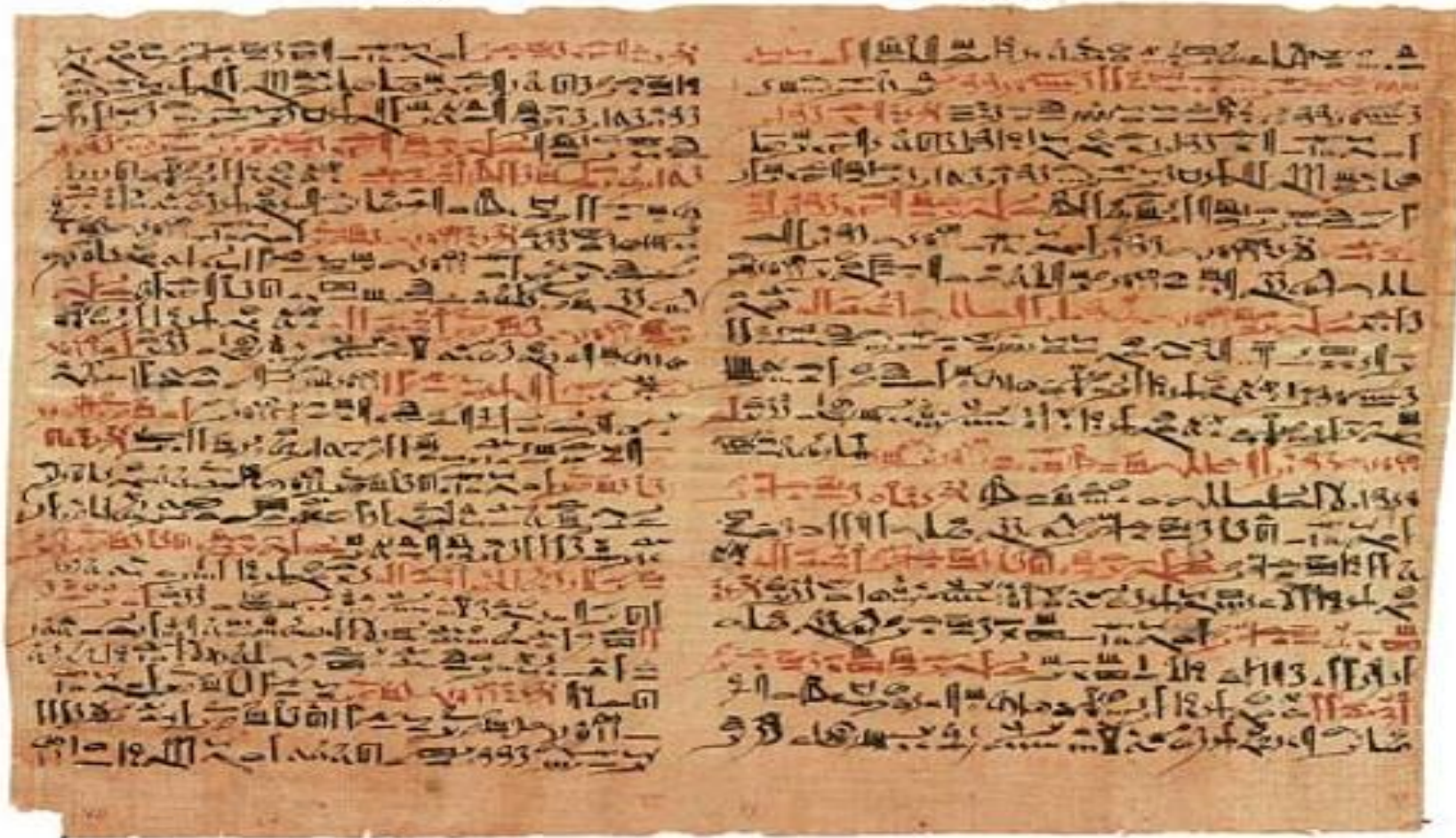


Fig. 1: Edwin Smith Papyrus



Ovarian Cancer

75%: present > stage I

80%: respond to surgery & chemo

80%: relapse within 2 years

80%: of them will die within further 2 years

| Country | Incidence ASR | Top 5 most common Cancers (incidence expressed as ASR) | | | | | | | | | |
|----------------|------------------|--------------------------------------------------------|------|------------|------|------------|------|------------|------|--------------|------|
| | | 1st | | 2nd | | 3rd | | 4th | | 5th | |
| Lebanon | 169.6 | Breast | 55.4 | Prostate | 25.4 | Lung | 18.0 | Bladder | 14.5 | Colorectum | 13.0 |
| Bahrain | 129.6 | Breast | 49.8 | Lung | 19.7 | Prostate | 13.3 | Colorectum | 10.2 | Bladder | 7.8 |
| Jordan | 128.9 | Breast | 47.0 | Colorectum | 16.8 | Prostate | 13.9 | Lung | 11.2 | Corpus uteri | 6.9 |
| Tunisia | 121.9 | Breast | 30.3 | Lung | 17.4 | Prostate | 11.6 | Colorectum | 10.3 | Bladder | 8.5 |
| Kuwait | 117.2 | Breast | 47.7 | Colorectum | 12.1 | Prostate | 11.6 | Lung | 9.4 | NHL*** | 7.1 |
| Qatar | 116.9 | Breast | 38.1 | Prostate | 15.0 | Lung | 11.9 | Colorectum | 10.7 | Bladder | 9.4 |
| Somalia | 113.5 | Breast | 21.1 | Cervix | 20.3 | Esophagus | 9.1 | Prostate | 8.9 | Colorectum | 5.7 |
| Libya | 111.3 | Breast | 23.1 | Lung | 14.6 | Colorectum | 11.8 | Prostate | 10.3 | Corpus uteri | 7.8 |
| Western Sahara | 109.8 | Breast | 30.8 | Cervix | 28.4 | Stomach | 11.9 | Prostate | 11.2 | Lung | 7.9 |
| Egypt | 108.4 | Breast | 37.3 | Bladder | 13.5 | NHL | 8.7 | Liver | 9.3 | Lung | 5.9 |
| Algeria | 105.8 | Breast | 28.6 | Lung | 10.5 | Cervix | 10.4 | Colorectum | 9.8 | Prostate | 7.1 |
| Iraq | 104.9 | Breast | 31.1 | Lung | 8.3 | Bladder | 8.1 | NHL | 6.6 | Leukemia | 5.9 |
| Mauritania | 103.0 | Cervix | 35.1 | Breast | 23.9 | Prostate | 17.9 | Liver | 16.4 | Stomach | 6.2 |
| Morocco | 101.9 | Breast | 36.5 | Cervix | 14.1 | Lung | 13.3 | Prostate | 9.8 | Colorectum | 7.3 |
| Djibouti | 98.0 | Breast | 21.8 | Cervix | 12.7 | Prostate | 7.2 | Kaposi | 6.9 | NHL | 6.0 |
| Eritrea | 95.8 | Breast | 22.0 | Cervix | 12.9 | Prostate | 7.8 | Esophagus | 5.9 | NHL | 5.6 |
| Yemen | 89.8 | Breast | 20.8 | Liver | 8.8 | NHL | 6.0 | Esophagus | 5.8 | Stomach | 5.2 |
| UAE | 88.8 | Breast | 36.7 | Prostate | 9.6 | Colorectum | 7.5 | Cervix | 7.4 | Lung | 7.3 |
| Oman | 87.6 | Breast | 28.6 | Prostate | 9.0 | Colorectum | 7.2 | Lung | 6.0 | NHL | 5.9 |
| KSA | 87.6 | Breast | 22.4 | Colorectum | 12.1 | Prostate | 7.7 | Lung | 5.2 | NHL | 5.2 |
| Sudan | 81.5 | Breast | 24.6 | Prostate | 9.0 | Cervix | 7.0 | NHL | 5.9 | Ovary | 5.8 |
| Syria | 72.2 | Breast | 23.0 | Colorectum | 6.5 | Lung | 6.1 | Prostate | 5.6 | Bladder | 4.4 |
| Palestine | 54.9 | Breast | 12.5 | Prostate | 7.4 | Lung | 5.9 | Colorectum | 5.6 | CNS | 4.2 |

Egypt Cancer Problem

- **100,000 new cancer patients annually.**
- **300,000 cancer patients under treatment annually.**
- **Advanced stage at presentation, affecting the survival rates.**
- **Health expenditure total: 4.66% of GDP.**
- **Numbers expected to grow due to:**
 - **Population growth and aging**
 - **Advances in detection, treatment, and survival.**
 - **Increasing chronic diseases (e.g. HCV and HC carcinoma).**

Ovarian Cancer in Egypt

- The annual incidence of ovarian cancer in Egypt:
5.4 / 100,000 women

The proportion of women younger than 50 years with ovarian cancer in Egypt is approximately 45%!

women

- The rate in women 50-69 years is 17.7 / 100,000
women

Most frequent cancers in Egypt 2008 - 2011

Ibrahim et al 2014

| | Site | % | Crude rate | ASR |
|------------|----------------------|-------|------------|------|
| Males | Liver | 33.63 | 39.5 | 61.8 |
| | Bladder | 10.71 | 12.6 | 21.1 |
| | Lung [#] | 5.69 | 6.7 | 10.4 |
| | Non-Hodgkin lymphoma | 5.48 | 6.4 | 8.8 |
| | Brain ^{##} | 5.48 | 6.4 | 8.8 |
| | Prostate | 4.27 | 5.0 | 9.3 |
| Females | Breast | 32.04 | 35.8 | 48.8 |
| | Liver | 13.54 | 15.1 | 24.4 |
| | Brain ^{##} | 5.18 | 5.8 | 8.0 |
| | Ovary | 4.12 | 4.6 | 6.3 |
| | Non-Hodgkin lymphoma | 3.80 | 4.2 | 6.1 |
| | Thyroid | 3.28 | 3.7 | 4.3 |
| Both Sexes | Liver | 23.81 | 27.5 | 43.6 |
| | Breast | 15.41 | 17.8 | 24.3 |
| | Bladder | 6.94 | 8.0 | 13.5 |
| | Brain ^{##} | 5.29 | 6.1 | 8.5 |
| | Non-Hodgkin lymphoma | 4.64 | 5.4 | 7.5 |
| | Lung [#] | 4.22 | 4.9 | 7.5 |

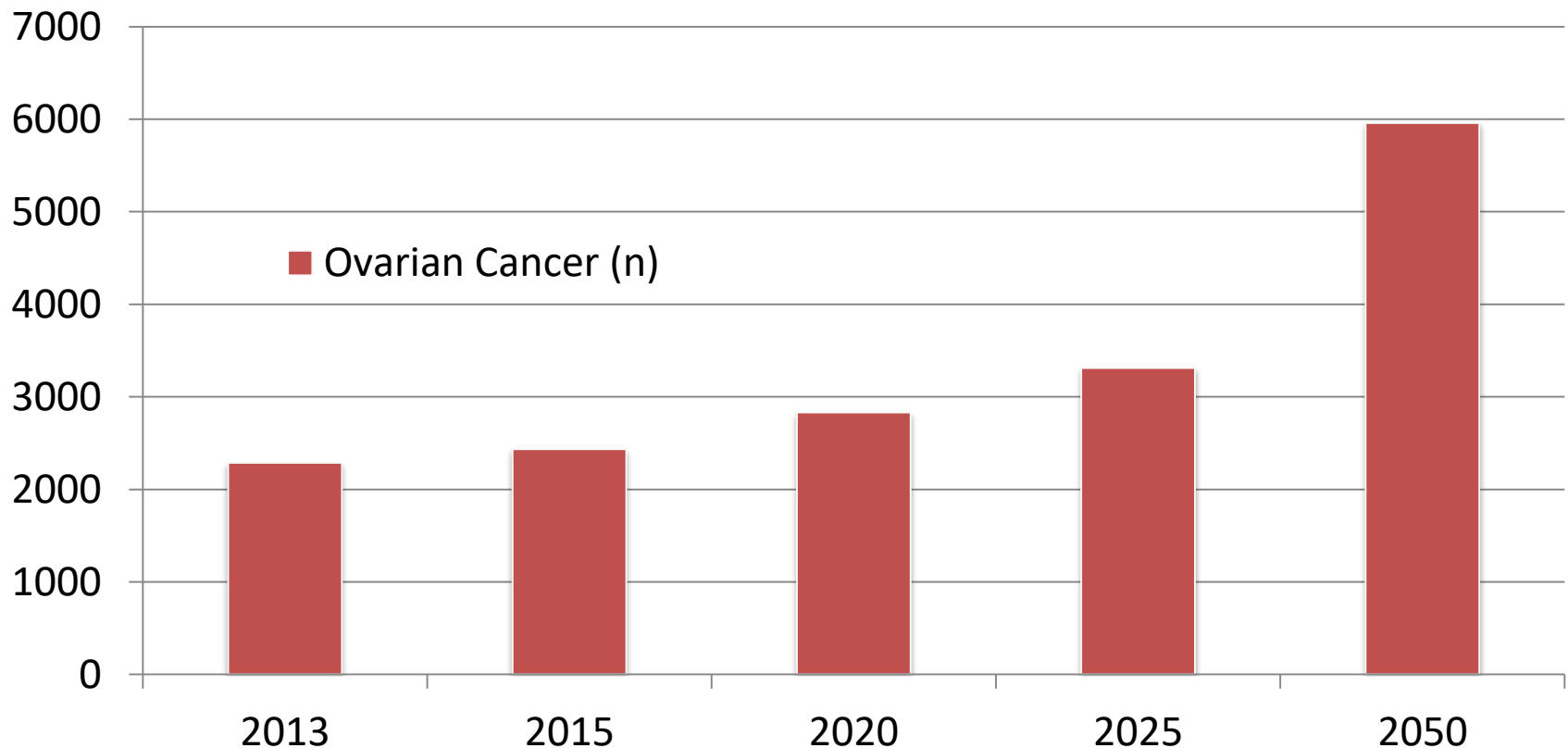
TABLE 7: Incidence rates/100,000 population of individual cancer sites in Lower, Middle, and Upper Egypt: females.

| Primary site | Lower Egypt 2009–2011 | | | Middle Egypt 2009 | | | Upper Egypt 2008 | | |
|----------------------------|--------------------------|------|--------|----------------------|------|--------|---------------------|------|--------|
| | Crude | ASR | % | Crude | ASR | % | Crude | ASR | % |
| Lip | 0.3 | 0.4 | 0.26% | 0.2 | 0.4 | 0.24% | 0.0 | 0.0 | 0.00% |
| Tongue | 0.3 | 0.5 | 0.26% | 0.3 | 0.5 | 0.34% | 0.2 | 0.2 | 0.16% |
| Mouth | 0.1 | 0.2 | 0.09% | 0.5 | 0.8 | 0.53% | 0.9 | 1.5 | 0.80% |
| Salivary glands | 0.2 | 0.2 | 0.13% | 0.3 | 0.4 | 0.29% | 0.2 | 0.4 | 0.16% |
| Tonsil | 0.1 | 0.1 | 0.04% | 0.0 | 0.1 | 0.05% | 0.0 | 0.0 | 0.00% |
| Other oropharynx | 0.0 | 0.0 | 0.00% | 0.1 | 0.1 | 0.10% | 0.2 | 0.3 | 0.16% |
| Nasopharynx | 0.1 | 0.1 | 0.04% | 0.0 | 0 | 0.05% | 0.2 | 0.2 | 0.16% |
| Hypopharynx | 0.0 | 0.0 | 0.00% | 0.4 | 0.4 | 0.38% | 0.6 | 0.9 | 0.48% |
| Pharynx unsp. | 0.0 | 0.0 | 0.00% | 0.0 | 0.0 | 0.05% | 0.0 | 0.0 | 0.00% |
| Esophagus | 0.9 | 1.2 | 0.65% | 1.2 | 1.9 | 1.25% | 1.1 | 1.6 | 0.96% |
| Stomach | 2.3 | 3.2 | 1.73% | 1.2 | 1.8 | 1.25% | 1.9 | 3.1 | 1.60% |
| Small intestine | 0.3 | 0.5 | 0.22% | 0.4 | 0.6 | 0.43% | 0.6 | 0.9 | 0.48% |
| Colon | 3.0 | 4.2 | 2.30% | 2.2 | 3.2 | 2.31% | 2.4 | 3.5 | 2.08% |
| Rectum | 0.9 | 1.0 | 0.65% | 1.0 | 1.2 | 1.01% | 0.7 | 1.3 | 0.64% |
| Anus | 0.1 | 0.1 | 0.04% | 0.1 | 0.2 | 0.14% | 0.2 | 0.3 | 0.16% |
| Liver | 21.6 | 32.6 | 16.37% | 8.6 | 13.7 | 8.95% | 6.0 | 8.7 | 5.12% |
| Gallbladder and so forth | 0.5 | 0.5 | 0.35% | 0.6 | 0.9 | 0.58% | 1.9 | 3.1 | 1.60% |
| Pancreas | 2.1 | 3.2 | 1.60% | 0.9 | 1.4 | 0.91% | 1.7 | 2.3 | 1.44% |
| Nose, sinuses and so forth | 0.3 | 0.5 | 0.26% | 0.1 | 0.2 | 0.14% | 0.2 | 0.2 | 0.16% |
| Larynx | 0.2 | 0.3 | 0.17% | 0.3 | 0.4 | 0.29% | 0.4 | 0.7 | 0.32% |
| Trachea, Bronchus, Lung | 3.7 | 5.3 | 2.82% | 2.2 | 3.1 | 2.26% | 2.4 | 3.8 | 2.08% |
| Other Thoracic organs | 0.6 | 0.8 | 0.43% | 0.5 | 0.7 | 0.48% | 0.0 | 0.0 | 0.00% |
| Bone | 2.0 | 2.3 | 1.52% | 1.8 | 2.4 | 1.92% | 3.4 | 4.4 | 2.88% |
| Melanoma of skin | 0.2 | 0.3 | 0.17% | 0.0 | 0.1 | 0.05% | 0.0 | 0.0 | 0.00% |
| Other skin | 1.7 | 2.4 | 1.26% | 1.0 | 1.5 | 1.06% | 1.9 | 3.1 | 1.60% |
| Mesothelioma | 0.3 | 0.3 | 0.22% | 0.2 | 0.3 | 0.24% | 0.4 | 0.7 | 0.32% |
| Kaposi sarcoma | 0.0 | 0.0 | 0.00% | 0.0 | 0.1 | 0.05% | 0.0 | 0.0 | 0.00% |
| Connective, Soft tissue | 2.3 | 2.6 | 1.78% | 0.4 | 0.6 | 0.38% | 1.9 | 2.2 | 1.60% |
| Breast | 43.8 | 53 | 33.22% | 25.8 | 35.6 | 26.84% | 45.3 | 64.5 | 38.72% |
| Vulva | 0.0 | 0.0 | 0.00% | 0.3 | 0.4 | 0.34% | 0.0 | 0.0 | 0.00% |
| Vagina | 0.1 | 0.2 | 0.09% | 0.1 | 0.2 | 0.14% | 0.6 | 1.0 | 0.48% |
| Cervix Uteri | 1.7 | 2.4 | 1.26% | 1.0 | 1.5 | 1.06% | 0.6 | 0.9 | 0.48% |
| Corpus Uteri | 0.6 | 0.9 | 0.43% | 0.6 | 0.9 | 0.67% | 1.7 | 2.9 | 1.44% |
| Uterus unsp. | 3.7 | 5.3 | 2.77% | 1.0 | 1.3 | 1.06% | 2.4 | 3.8 | 2.08% |
| Ovary | 5.1 | 6.4 | 3.90% | 3.6 | 5.0 | 3.75% | 7.1 | 10.2 | 6.08% |
| Other female genital | 0.0 | 0.0 | 0.00% | 0.0 | 0.1 | 0.05% | 0.4 | 0.6 | 0.32% |
| Placenta | 0.0 | 0.0 | 0.00% | 0.0 | 0.0 | 0.05% | 0.2 | 0.2 | 0.16% |
| Kidney | 1.1 | 1.6 | 0.87% | 1.2 | 1.8 | 1.25% | 0.7 | 1.1 | 0.64% |
| Renal pelvis | 0.2 | 0.3 | 0.17% | 0.2 | 0.3 | 0.19% | 0.2 | 0.2 | 0.16% |
| Ureter | 0.0 | 0.0 | 0.00% | 0.0 | 0.0 | 0.00% | 0.0 | 0.0 | 0.00% |
| Bladder | 3.7 | 5.9 | 2.77% | 3.1 | 4.9 | 3.27% | 3.6 | 5.7 | 3.04% |
| Other urinary organs | 0.1 | 0.1 | 0.04% | 0.0 | 0.0 | 0.00% | 0.0 | 0.0 | 0.00% |
| Eye | 0.1 | 0.1 | 0.04% | 0.3 | 0.5 | 0.34% | 0.2 | 0.2 | 0.16% |

Ovarian Cancer: projected annual case load (Egypt)

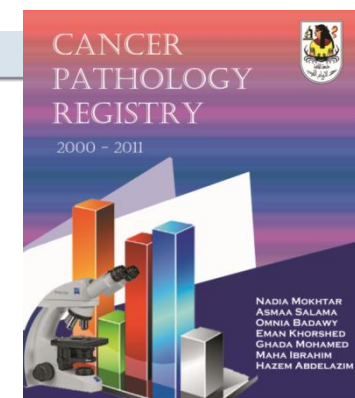
Ibrahim et al 2014

Ovarian Cancer (n)



| Less Developed | | | Egypt | | | More Developed | | |
|---------------------|-----------|-------|--------------------|-----------|-------|----------------------|-----------|-------|
| Site | Incidence | | Site | Incidence | | Site | Incidence | |
| | % | ASR | | % | ASR | | % | ASR |
| <i>Lung</i> | 12.4 | 19 | <i>Breast</i> | 18.3 | 37.3 | <i>Colorectum</i> | 13.1 | 30.1 |
| <i>Stomach</i> | 10 | 15.2 | <i>Bladder</i> | 11.6 | 13.5 | <i>Lung</i> | 13 | 31.3 |
| <i>Breast</i> | 9.7 | 27.1 | <i>NHL</i> | 8.4 | 8.7 | <i>Breast</i> | 12.5 | 66.4 |
| <i>Liver</i> | 8.8 | 13 | <i>Liver</i> | 8 | 9.3 | <i>Prostate</i> | 11.6 | 61.7 |
| <i>Colorectum</i> | 7.1 | 10.7 | <i>Lung</i> | 5 | 5.9 | <i>Stomach</i> | 4.9 | 11.4 |
| <i>Cervix uteri</i> | 6.4 | 17.7 | <i>Leukemia</i> | 4.5 | 4.3 | <i>Bladder</i> | 4.1 | 9.1 |
| <i>Esophagus</i> | 5.6 | 8.6 | <i>Colorectum</i> | 4.2 | 4.4 | <i>Kidney</i> | 3.3 | 8.6 |
| <i>Prostate</i> | 3.6 | 11.9 | <i>CNS</i> | 3.4 | 3.3 | <i>NHL</i> | 3.3 | 8.6 |
| <i>Leukemia</i> | 3 | 4 | <i>Prostate</i> | 2.4 | 6.6 | <i>Pancreas</i> | 3 | 6.8 |
| <i>NHL</i> | 2.5 | 3.5 | <i>Ovary</i> | 2.3 | 4.7 | <i>Skin Melanoma</i> | 3 | 9 |
| <i>All cancers</i> | 100 | 146.8 | <i>All cancers</i> | 100 | 108.4 | <i>All cancers</i> | 100 | 255.8 |

| Primary Malignant Neoplasms | No. | % |
|------------------------------------------------|------------|--------------|
| Epithelial Tumors | 627 | 82.61 |
| Papillary serous adenocarcinoma | 352 | 46.38 |
| Mucinous adenocarcinoma | 139 | 18.31 |
| Endometrioid adenocarcinoma | 58 | 7.64 |
| Clear cell carcinoma | 15 | 1.98 |
| Transitional cell carcinoma | 14 | 1.84 |
| Mixed cell adenocarcinoma | 8 | 1.05 |
| Squamous cell carcinoma | 1 | 0.13 |
| Undifferentiated carcinoma | 18 | 2.38 |
| Adenocarcinoma (NOS) | 22 | 2.9 |
| Mesenchymal Tumors | 5 | 0.66 |
| Undifferentiated ovarian sarcoma | 1 | 0.13 |
| Leiomyosarcoma | 3 | 0.4 |
| Rhabdomyosarcoma | 1 | 0.13 |
| Mixed epithelial and mesenchymal tumors | | |
| Malignant mullerian mixed tumor | 12 | 1.58 |
| Sex cord-stromal malignant tumors | | |
| Fibrosarcoma | 4 | 0.53 |
| Malignant sertoli-leydig cell tumor | 2 | 0.26 |
| Germ cell tumors | 95 | 12.52 |
| Dysgerminoma | 34 | 4.48 |
| Yolk-sac tumor | 20 | 2.64 |
| Embryonal carcinoma | 4 | 0.53 |
| Immature teratoma | 29 | 3.82 |
| Choriocarcinoma | 1 | 0.13 |
| Mixed germ cell tumor | 7 | 0.92 |
| Hematopoietic Tumors | | |
| NHL | 14 | 1.84 |
| Total | 759 | 100 |



| Primary Malignant Neoplasms | Current Registry | | Previous Registry | |
|------------------------------------------------|------------------|--------------|-------------------|--------------|
| | No. | % | No. | % |
| Epithelial Tumors | 627 | 82.61 | 92 | 85.19 |
| Papillary serous adenocarcinoma | 352 | 46.38 | 49 | 45.37 |
| Mucinous adenocarcinoma | 139 | 18.31 | 11 | 10.19 |
| Endometrioid adenocarcinoma | 58 | 7.64 | 4 | 3.7 |
| Clear cell carcinoma | 15 | 1.98 | 1 | 0.93 |
| Transitional cell carcinoma | 14 | 1.84 | 0 | 0 |
| Mixed cell adenocarcinoma | 8 | 1.05 | 0 | 0 |
| Squamous cell carcinoma | 1 | 0.13 | 0 | 0 |
| Undifferentiated carcinoma | 18 | 2.38 | 18 | 16.67 |
| Adenocarcinoma (NOS) | 22 | 2.9 | 9 | 8.33 |
| Mesenchymal Tumors | 5 | 0.66 | | |
| Undifferentiated ovarian sarcoma | 1 | 0.13 | 0 | |
| Leiomyosarcoma | 3 | 0.4 | 1 | 0.93 |
| Rhabdomyosarcoma | 1 | 0.13 | 0 | |
| Mixed epithelial and mesenchymal tumors | | | | |
| Malignant mullerian mixed tumor | 12 | 1.58 | 1 | 0.93 |
| Sex cord-stromal malignant tumors | | | | |
| Fibrosarcoma | 4 | 0.53 | 0 | 0 |
| Malignant sertoli-leydig cell tumor | 2 | 0.26 | 0 | 0 |
| Germ cell tumors | 95* | 12.52 | 14 | 12.96 |
| Dysgerminoma | 34 | 4.48 | 8 | 7.41 |
| Yolk-sac tumor | 20 | 2.64 | 1 | 0.93 |
| Embryonal carcinoma | 4 | 0.53 | 2 | 1.85 |
| Immature teratoma | 29 | 3.82 | 0 | 0 |
| Choriocarcinoma | 1 | 0.13 | 0 | 0 |
| Mixed germ cell tumor | 7 | 0.92 | 3 | 2.78 |
| Hematopoietic Tumors | | | | |
| NHL | 14 | 1.84 | 0 | 0 |
| Total | 759 | 100 | 108 | 100 |

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| Authors | Publication year | Center | Number of cases | Years covered |
|-----------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------|-----------------|---------------|
| Dolbey RV and Mooroo AW | 1924 | Kasr El-Aini | 671 | 1920-1923 |
| El-Sebai I, El-Bolkainy MN and Hussein MH | 1973 | The National Cancer Institute (NCI) | 4602 | 1971-1972 |
| Bedwani R | 1978 | High Institute of Medical Research, Alexandria | 6789 | 1974-1977 |
| Sherif M and Ibrahim AS | 1987 | The National Cancer Institute (NCI) | 32305 | 1970-1985 |
| Mokhtar NM | 1991 | NCI, Pathology Series | 15112 | 1985-1989 |
| El-Bolkainy MN | 1991 | Private Pathology Series | 7513 | 1985-1989 |
| Ibrahim AS, Coordinator | 2002 | NCR, MOH* (Compilation of 7 hospital-based registries and one regional population-based registry (Gharbiah) | 18420 | 1999-mid 2001 |
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| | |
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National Cancer Registry Program of Egypt (NCRPE) Patient Management Data Form

A- Patient ID:

| | | | |
|----------------------------------------------------------------------------|--|--|--|
| 1- Name: Initial..... Middle name..... Last name: Family Name: | | | |
| 2- Abstract Ref. No. | | | |

B- First Course of Cancer Directed Therapy:

| |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3- Date of the first course: :/...../..... |
| 4- Treatment status: No treatment given <input type="checkbox"/> Treatment given <input type="checkbox"/> Active surveillance (watchful waiting) <input type="checkbox"/> Unknown if treatment was given <input type="checkbox"/> |

B.1- First Surgical Procedure:

| |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5- Reason for no surgery of primary site: Surgery of the primary site was performed <input type="checkbox"/> Surgery of the primary site was not performed (not part of the planned first course treatment) <input type="checkbox"/> Surgery of the primary site was not performed (contraindicated due to patient risk factors) <input type="checkbox"/> Surgery of the primary site was not performed (patient died prior to planned surgery) <input type="checkbox"/> Surgery of the primary site was not performed (recommended and not performed due to unknown reason) <input type="checkbox"/> Surgery of the primary site was not performed (recommended and refused by patient, family or guardian) <input type="checkbox"/> Surgery of the primary site was recommended by it is unknown if it was performed <input type="checkbox"/> Unknown whether surgery of the primary site was recommended or performed (autopsy or death certificate only) <input type="checkbox"/> |
| 6- Date of the first surgical procedure:/...../..... |
| 7- Date of the most definitive surgical resection of the primary site:/...../..... |
| 8- Surgical procedure of the primary site (text and code) (N.B.: Mention site and name of procedure) |

9- Surgical margins of the primary site: No residual tumor ☐ Residual tumor, NOS ☐
Microscopic residual tumor ☐ Macroscopic residual tumor ☐ Margins not evaluable ☐
No primary site surgery ☐ Unknown or not applicable ☐

10- Scope of regional lymph node surgery: None ☐ Biopsy or aspiration of regional lymph node, NOS ☐
Sentinel lymph node biopsy ☐ Number of regional lymph nodes removed unknown or not stated ☐
1-3 regional lymph nodes removed ☐ 4 or more regional lymph nodes removed ☐
Sentinel node biopsy, and other LN remove at same time, or timing not stated ☐
Sentinel node biopsy, and other LN removed at different times ☐ Unknown or not applicable ☐

11- Surgical procedure / other site: None ☐ Nonprimary surgical procedure performed ☐
Nonprimary surgical procedure to other regional sites ☐ Nonprimary surgical procedure to distant lymph node(s) ☐
Nonprimary surgical procedure to distant site ☐ Combination of codes ☐ Unknown ☐

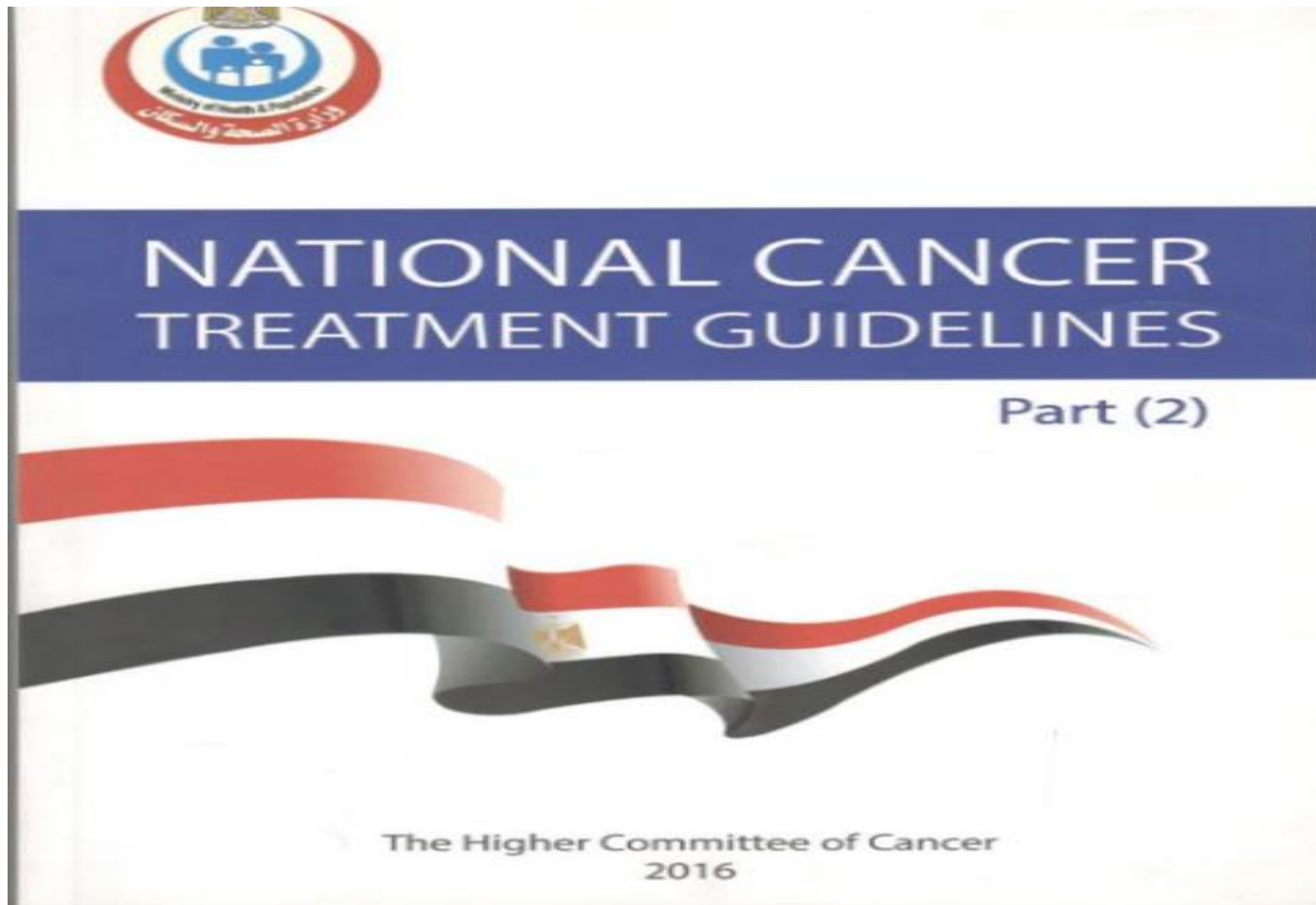
12- Date of surgical discharge:/...../.....

13- Readmission to the same hospital within 30 days of surgical discharge:
No surgical procedure of the primary site or the patient was not readmitted to the same hospital within 30 days ☐
A patient was surgically treated and was readmitted within 30 days. The readmission was unplanned ☐
A patient was surgically treated and was readmitted within 30 days. The readmission was planned (chemo, revision ..etc) ☐
A patient was surgically treated and was readmitted within 30 days, he had both planned and unplanned readmission ☐
It is unknown whether surgery of the primary site or readmission happened (Death Certificate Only) ☐

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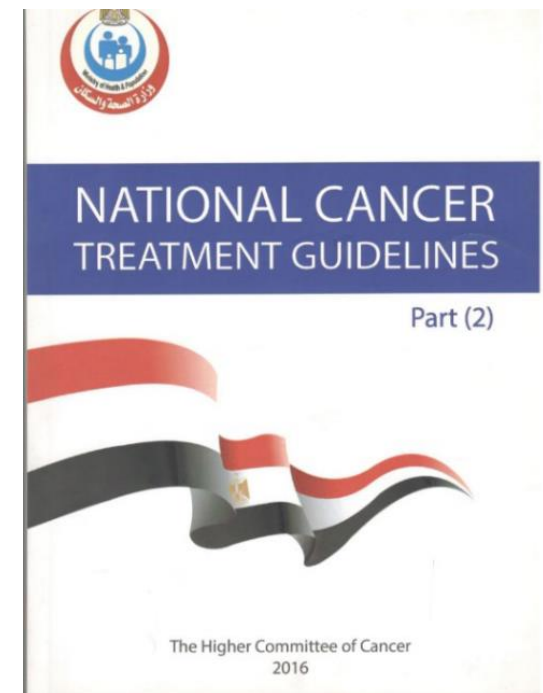
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Patient Care

- **Treatment according to institutional, national treatment protocols or clinical trials.**
- **IRB approval is mandatory**
- **Patient enrollment in international studies (e.g. EORTC)**
- **Industry sponsored new drug studies: (Tarceva®, Avastin®, Gleevec®, Sutent®)**
- **Quality assurance monitoring**



Cancer Care Providers

- **Three Cancer Institutes . (University Affiliation)**
- **Eight Cancer Centres. (MOH)**
- **Cancer Units In NHS .**
- **Cancer Units In Private and Specialized Sectors.**

ROLE OF SURGERY

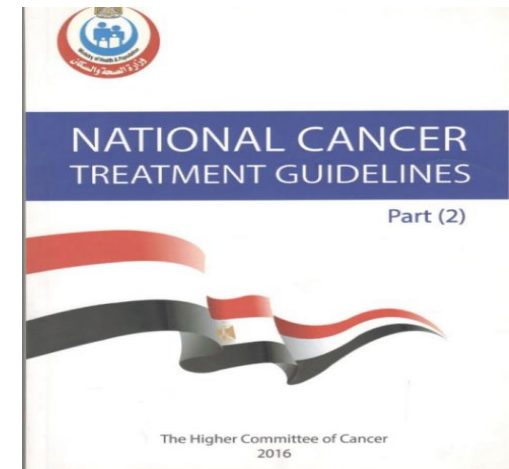
Early Disease : Stage (I-II)

Staging Laparotomy :

- TAH –Bilateral Salpingo-oophorectomy.
- Omentectomy-Peritoneal Lavage.
- Retroperitoneal Nodal status.
- Fertility Sparing Surgery.

Advanced Stage : Stage (III-IV)

- Cytoreductive Surgery : CRS
CC 0- CC1: Tumour less than 1 cm
- Interval Cytoreduction:
Following upfront Incomplete Cyto reduction and 3 Cycles of Chemotherapy.
- Secondary Cytoreduction : **AGO Score positive**
For Recurrent / Progressive Disease.
- Cytoreductive Surgery - Peritonectomy–CRS & HIPEC:
In recurrent disease at few anatomical sites after a long treatment Interval.



Adjuvant Treatment

Early Ovarian Cancer (Stage I-II)

- Stage II-Grade 2-3-Clear Cell-positive Cytology.
- Stage IA grade 3
- Stage IB grade 3
- Stage IC grade Any Grade
- Stage II.

Advanced Stage :

- Paclitaxel / Carboplatin AUC 5.
- Dose –Dense Paclitaxel .

Targeted Therapy :

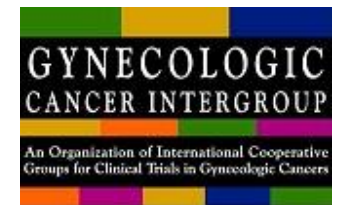
- Bevacizumab
- Suboptimal Surgery-Stage IV with Chemotherapy.



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National Cancer Institute-NCI Cairo University



- **In 1969, NCI was established as an affiliate of Cairo University**
- **Degree-granting academic Institution and a cancer treatment and research center**
- **Largest comprehensive cancer center in the Middle East and Africa.**
- **Total capacity: 350 Beds (85% Free)**
 - **19,000 new patients diagnosed / year**
 - **196,000 patients followed-up from previous years**

International Collaborators

- **European School of Oncology**
- **European Society of Medical Oncology (ESMO)**
- **The European Organization for Research and Treatment of Cancer (EORTC)**
- **Union for International Cancer Control (UICC)**
- **World Health Organization (WHO)**



Over 9 years (2010 – 2017), female genital system represented 4.8% of all cancers among both genders, with an absolute number of 3987 cases

| | No | % |
|----------------------------|-------------|-------------|
| Systems | | |
| Upper GIT | 2506 | 3.0% |
| Lower GIT | 14745 | 17.7% |
| Respiratory | 6104 | 7.3% |
| Bones | 1535 | 1.8% |
| Leukemia | 6417 | 7.7% |
| Lymphomas, nodal | 6047 | 7.2% |
| Lymphomas, extra nodal | 1159 | 1.4% |
| Other blood | 519 | .6% |
| Skin | 1918 | 2.3% |
| ST | 2370 | 2.8% |
| Retroperitoneum & NB | 261 | .3% |
| Breast | 16330 | 19.6% |
| FGS | 3987 | 4.8% |
| MGS | 1420 | 1.7% |
| Kidneys & Urinary system | 8706 | 10.4% |
| Eye, brain & nervous sys | 2424 | 2.9% |
| Thyroid & endocrine glands | 1782 | 2.1% |
| SUP | 4745 | 5.7% |
| Other sites | 299 | .4% |
| Advanced & unknown sites | 226 | .3% |
| Group Total | 83500 | 100.0% |

Site distribution of female genital system: Ovaries represented > 2/5th of cancers followed by cervix uteri 25.3% and corpus uteri 19.1%

| | No | % |
|----------------------|------|--------|
| Labia majors | 5 | .1% |
| Vulva | 142 | 3.6% |
| Vagina | 119 | 3.0% |
| Cervix uteri | 1000 | 25.3% |
| Endometrium | 269 | 6.8% |
| Corpus uteri | 755 | 19.1% |
| Ovaries | 1629 | 41.1% |
| Other female genital | 40 | 1.0% |
| Group Total | 3959 | 100.0% |

Major Surgeries at Gynecologic Oncology Unit

- **Cytoreductive surgeries and HIPEC :2-5 operations per month.**
- **Panhysterectomies: 10-15 operations per month.**
- **Staging for ovarian carcinoma: 20-35 per month.**
- **Wertheim's operation for cervical carcinoma: 8-15 operations per month.**

العمليات

- أولاً عدد مفصل للمرضى الذين أجرى لهم عمليات جراحية بالمعهد عن الفترة من 2015/01/01 وحتى 2015/12/31

| م | الشهر | راس ورقبه | اورام نساء | مسالك | عظام وانسجه رخوه | جهاز هضمي | صدر | هيبك | ثدي المعهد | ثدى تجمع | الاجمالى |
|----|----------|-----------|------------|-------|------------------|-----------|-----|------|------------|----------|----------|
| 1 | يناير | 44 | 58 | 21 | 22 | 61 | 17 | 2 | 4 | 146 | 375 |
| 2 | فبراير | 67 | 48 | 31 | 21 | 61 | 22 | 0 | 5 | 140 | 395 |
| 3 | مارس | 91 | 52 | 27 | 23 | 68 | 26 | 3 | 6 | 186 | 482 |
| 4 | ابريل | 87 | 55 | 37 | 13 | 65 | 22 | 0 | 5 | 122 | 406 |
| 5 | مايو | 73 | 51 | 28 | 26 | 58 | 26 | 0 | 5 | 125 | 392 |
| 6 | يونيو | 59 | 44 | 39 | 22 | 82 | 25 | 2 | 4 | 112 | 389 |
| 7 | يوليو | 56 | 32 | 21 | 13 | 46 | 17 | 0 | 1 | 83 | 269 |
| 8 | اغسطس | 81 | 50 | 43 | 25 | 76 | 25 | 1 | 1 | 146 | 448 |
| 9 | سبتمبر | 50 | 34 | 31 | 30 | 55 | 15 | 3 | 4 | 118 | 340 |
| 10 | اكتوبر | 59 | 34 | 31 | 37 | 61 | 26 | 1 | 0 | 116 | 365 |
| 11 | نوفمبر | 70 | 46 | 43 | 25 | 71 | 26 | 1 | 5 | 125 | 412 |
| 12 | ديسمبر | 76 | 75 | 42 | 30 | 62 | 27 | 4 | 3 | 156 | 475 |
| | الاجمالى | 813 | 579 | 394 | 287 | 766 | 274 | 17 | 43 | 1575 | 4748 |

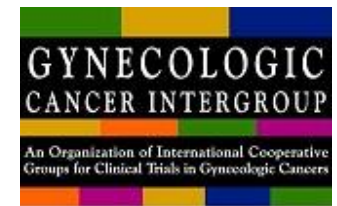
ملحوظة :- العمليات وهى وحدة العمليات بالمعهد القومى للأورام وتتكون من خمس غرف (5) عمليات لاجراء الجراحات المذكورة بالجدول .



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GYN-ONC & SURFACE PERITONEAL TUMOURS JOINT MDT : NCI & UMSM

27th March 2016

10 am-11 am

OPD-Committee Room

Members :

Surgical Oncology

Medical Oncology

Radiation Oncology

Radiology & Imaging





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Multi-Disciplinary GI & GYN Tumor Board

Request Form

Today Date: _____

Conference Date: _____

Patient Name: _____

MR# _____

Referring Physician: _____

Diagnosis: _____

Presenting Physician: _____

Presentation Type: Before Treatment ☐ after Treatment ☐

Pathology Review? ☒ Yes ☐ No

Staging: cT cN cM (OR) pT pN pM

☐ Outside Pathology _____

☐ UMMC Pathology _____

Is imaging review required? ☒ Yes ☐ No

☐ Outside Imaging (Downloaded to PACs) _____

☐ UMMC Imaging _____

Discussion Imaging Question: _____

Will patient be seen in Multi-D Clinic? ☒ Yes ☐ No

If yes, please mark all requested modalities

Surgical Oncology ☐ Dr. _____

Radiation Oncology ☐ Dr. _____

Medical Oncology ☐ Dr. _____

Interventional Radiology ☐ Dr. _____

Other: _____

Discussion Question: _____

***All requests for Tuesday GI Conference must be received no later than Friday 8 a.m. for Tuesday morning conference presentation. After 10 am on Friday any additional requests for conference must be submitted directly to and cleared by Radiology and/ or Pathology for acceptance. ***

Below for Multi-D Coordinator Use Only

Pathology:

Imaging:

Date Ordered: _____

Date Ordered: _____

Date Received: _____

Date Received: _____

Date Delivered: _____

Date Delivered: _____

MULTI-DISCIPLINARY GI & GYN TUMOR



MEETING MINUTES

11-12 AM SUNDAY MARCH 13 RD, 2016

22 S. Greene St. Room N1W92 Stoler-Pavilion Conference Room B

Sponsored by the University of Maryland School of Medicine

*The University of Maryland School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

*The University of Maryland School of Medicine designates this live activity for a maximum of 1 "AMA PRA Category 1 Credit". Physicians should claim only the credit commensurate with the extent of their participation in the activity.

1. Pancreatic Mass Dr. Hanna
MRN: _____
Pull: CT 2/16/2016
Before Tx After ☒
Clinical Trials ☐ cTeNeM
Dis ☐ ion of staging NCCN ☐ X

Discussion: Treatment Plan.

Recommendations: Surveillance Imaging in 6 months.

2. GB Cancer Dr. Hanna
MRN: _____
Pull: PET/CT 2/12/2016 & path
Before Tx After ☒
Clinical Trials ☐ cTeNeM
Dis ☐ ion of staging NCCN ☐ X

Discussion: Treatment Plan.

Recommendations: NOT Discussed.



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Multi-Disciplinary GI& GYN Tumor Board

Request Form

Today Date: _____

Conference Date: 12/6/2016

Patient Name: Sahar Ibrahim

MR# 116011394

Referring Physician: _____

Diagnosis: High grade ovarian Carcinoma Presenting Physician: _____

Presentation Type: Before Treatment ☐ After Treatment ☐

Pathology Review? Staging TccNcM ☐

☐ Outside Pathology ☐ NCI Pathology ☐

Is imaging review required? ☐ yes ☐

☐ outside NCI

Discussion Imaging Question: _____

Will patient be seen in Multi-D Clinic? ☐

No

If yes, please mark all requested modalities

Surgical Oncology Dr. ☐

Radiation Oncology Dr. ☐ Appointment Date: _____

Medical Oncology Dr. ☐

Interventional Radiology Dr. ☐

Other: _____

Discussion Question: Imaging revision ... decision: CTH Vs CRS& HIPEC then CTH

All requests for Sunday GYN & SPT Conference must be received no later than Thursday 8 a.m. for morning Sunday conference presentation. After 10am on Thursday any additional requests for conference must be submitted directly to and cleared by Radiology and/ or Pathology for acceptance.

Below for Multi-D Coordinator Use Only

Pathology:

Imaging:

Date Ordered: _____

Date Ordered: _____

Date Received: _____

Date Received: _____

Date Delivered: _____

Date Delivered: _____

Female pt, 43 Y old, HN: 116011394

S/P: Exploration >NCI for adnexal masses, 1/4/2016

Done Rt salpingo oophorectomy, Lt ovariectomy

Path: bilateral undiff. Carcinoma

IPT: +ve CK, CK7, WT-1

-ve for CK 20

Consistent with high grade ovarian carcinoma

MRI post operative >NCI: normal appearance of the uterus, absence of both ovaries.

RT multilocular cystic lesion is seen with internal fibrosis within, likely peritoneal inclusion cyst (post operative sequelae) rather than being ovarian

TM, normal

Referred to NCI for CTH vs Completion of surgery

Surgery

Radiation
Oncology

Medical
Oncology

Radiology

Algorithm

Request Form

Coordinator

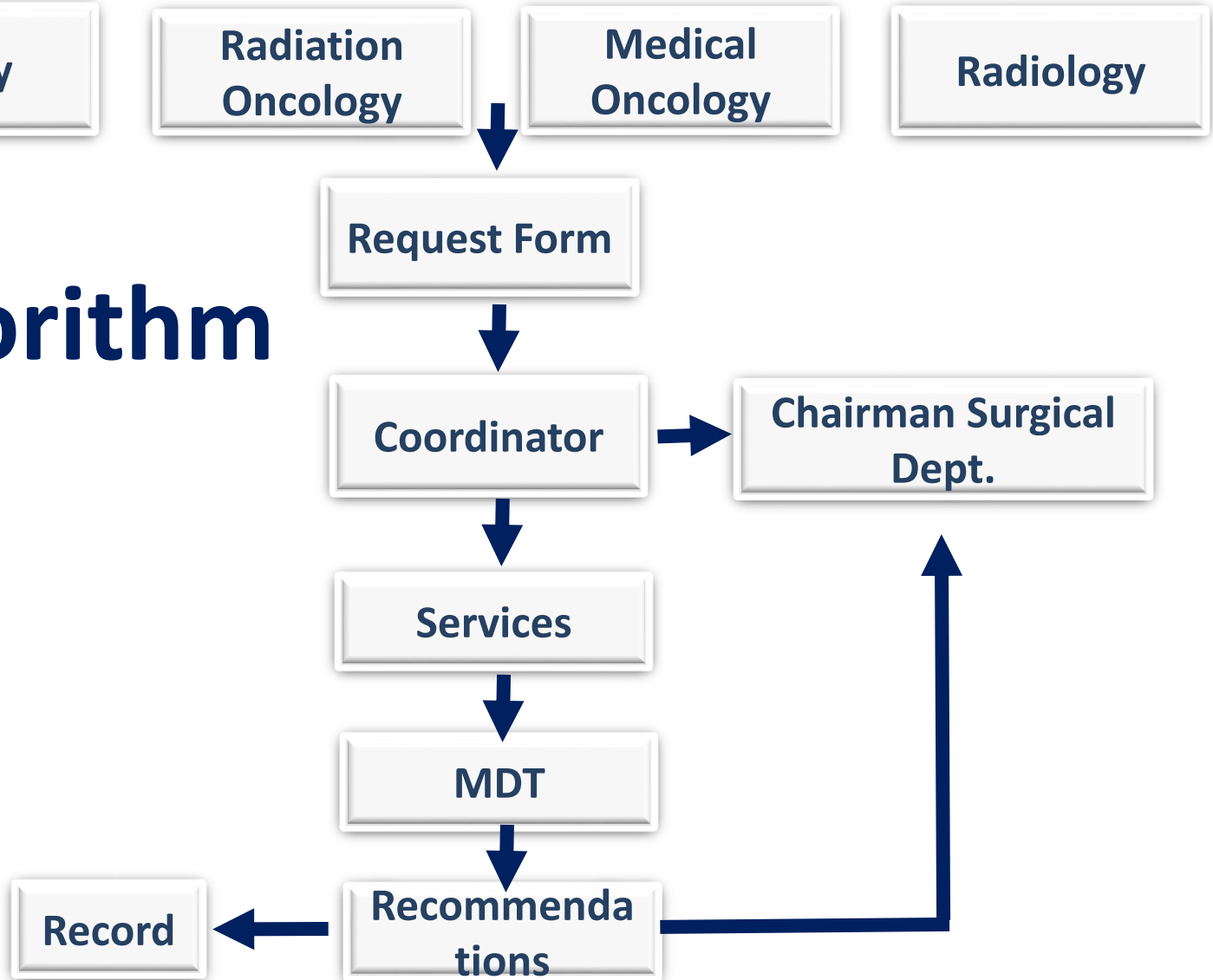
Chairman Surgical
Dept.

Services

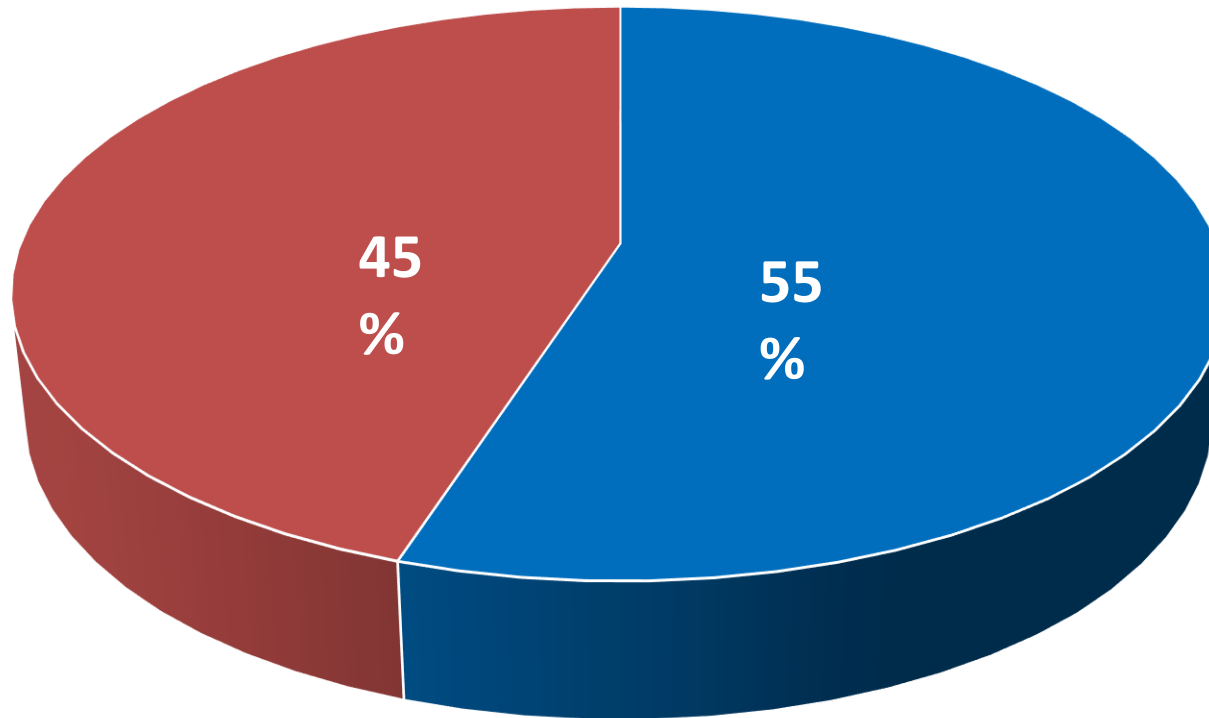
MDT

Record

Recommendations



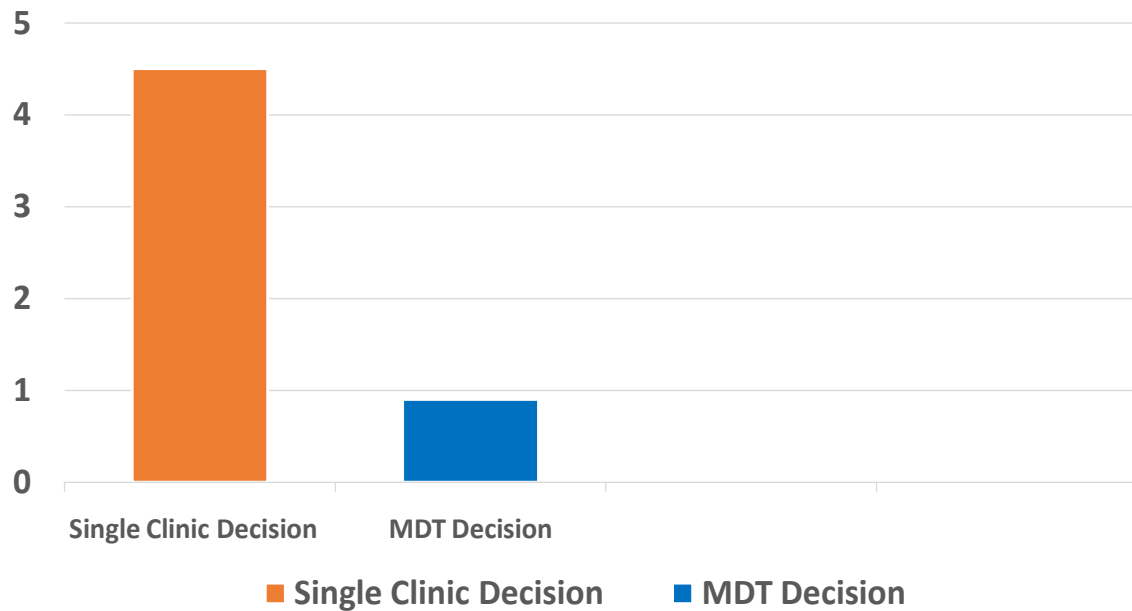
Variations In Decision Making



■ MDT Decision ■ Single Clinic Decision



Financial Impact



Cancer Research

- **Journal of The Egyptian National Cancer Institute (JENCI)**
Elsevier Published
- **Establishment of Regional Collaborative Groups**
 - Middle East Cancer Consortium (MECC)
 - Mediterranean Oncology Society (MOS)
 - European-Arab School of Oncology (EASO)





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EC CANCER
Research Article

Clinicopathological, Epidemiologic Characteristics and Treatment Outcomes of Ovarian Cancer Patients at NCI, Cairo University

Hanan R Nassar¹, Yasser A Sallam^{1*}, Tarek Darwish¹ and Mohamed A Elbassuiony²

¹*Department of Medical Oncology, National Cancer Institute, Cairo University, Egypt*

²*Department of Cancer, Tanta Cancer Center, Egypt*

***Corresponding Author:** Yasser A Sallam, Department of Medical Oncology, National Cancer Institute, Cairo University, Egypt.

Received: October 31, 2015; **Published:** May 10, 2016

| | Mean | Median | Number (%) |
|-------------|-------------|---------------|-------------------|
| Age | 44.9 ± 14.4 | 48 | 265 (100%) |
| 1-10 years | -- | -- | 2 (0.8%) |
| 11-20 years | -- | -- | 21 (7.9%) |
| 21-30 years | -- | -- | 23 (8.6%) |
| 31-40 years | -- | -- | 26 (10%) |
| 41-50 years | -- | -- | 90 (34%) |
| 51-60 years | -- | -- | 82 (31%) |
| 61-70 years | -- | -- | 16 (6%) |

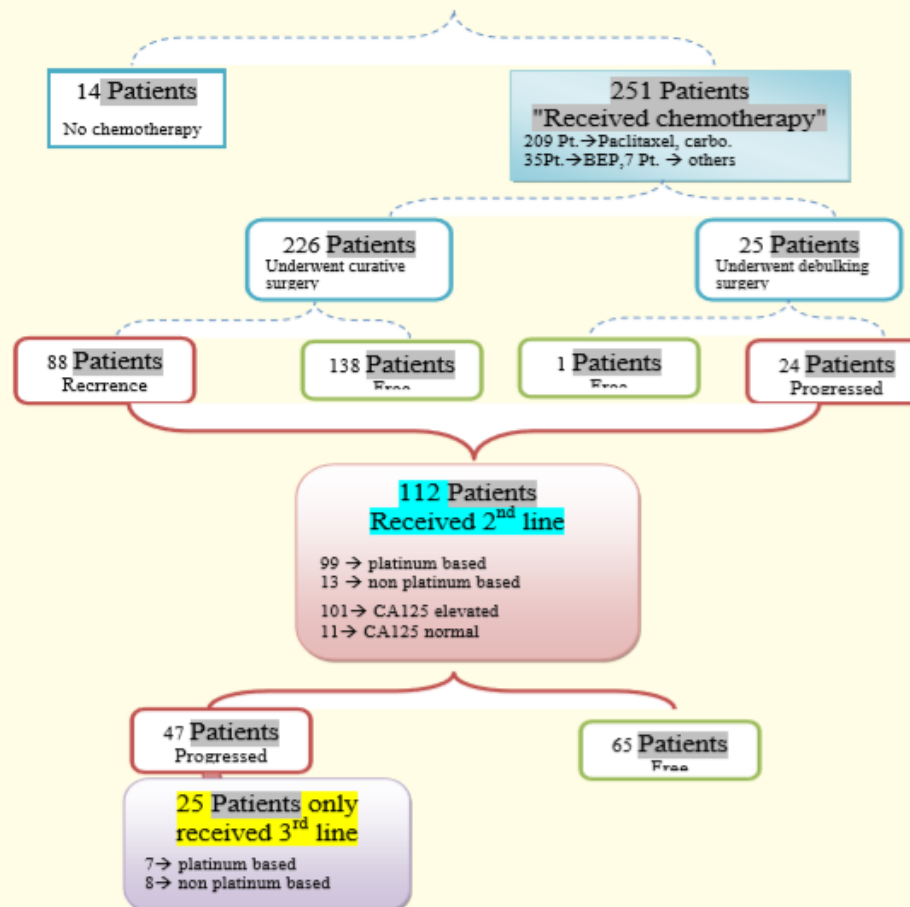
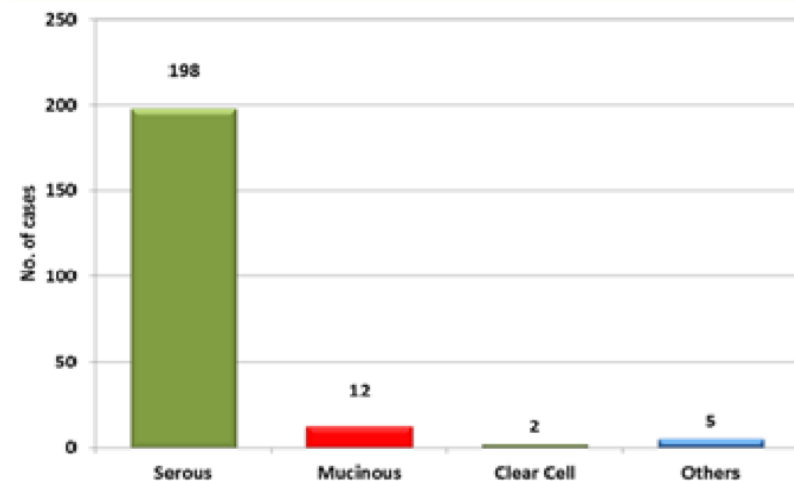
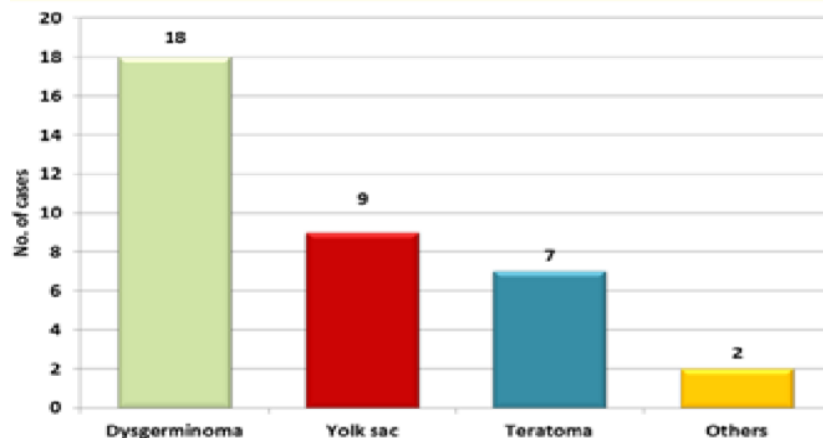
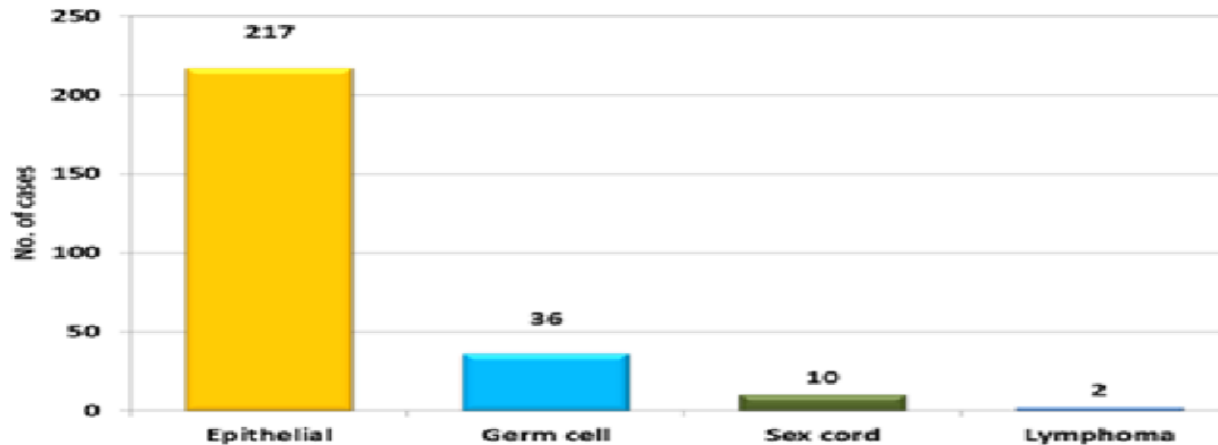
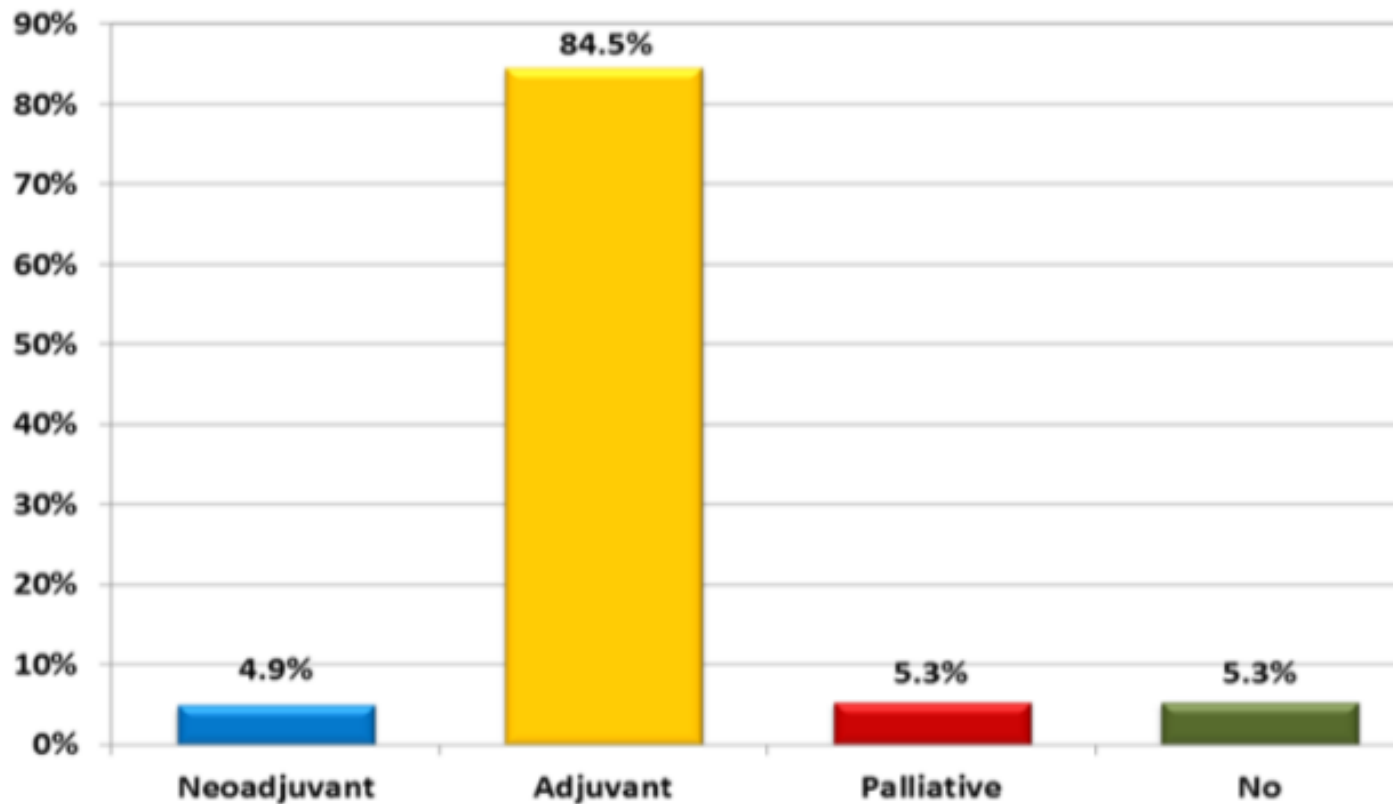


Figure 5: Summary of Treatment, Recurrence and Progression in Studied Group.

| | Number | Percentage |
|--------------------------------|--------|------------|
| Site | | |
| Bilateral | 118 | 44.5% |
| Right | 93 | 35.0% |
| Left | 54 | 20.5% |
| Histopathological Grade | | |
| Grade I | 74 | 27.9% |
| Grade II | 139 | 52.5% |
| Grade III | 52 | 19.6% |
| FIGO Staging | | |
| Stage I | 73 | 27.5% |
| EOC | 30 | 13.9% |
| NEOC | 43 | 89.6% |
| Stage II | 38 | 14.4% |
| EOC | 35 | 16.1% |
| NEOC | 3 | 6.3% |
| Stage III | 114 | 43.0% |
| EOC | 112 | 51.6% |
| NEOC | 2 | 4.1% |
| Stage IV | 40 | 15.1% |
| EOC | 40 | 18.4% |
| NEOC | 0 | 0% |





Results

- **Initial Surgical Treatment : 90% of Cases.**
- **First Line Adjuvant Chemotherapy- Paclitaxel-Carboplatin : 78% with response rate 55%.**
- **Second Line Chemotherapy –Platinum Based with response rate 58%.**

- **Five-Year Disease Free Survival : 57 %**
- **Progression Free Survival after first line
Chemotherapy : 8 months.**
- **Five-Year Overall Survival (OS) : 85%**

- For a better estimate of the Magnitude of the problem.

National Cancer Registry is a Must.

- Out reach programs for better awareness and better
- Identification of the non diagnosed ones.
- Health education (Schools, high schools and colleges).
- Mass Media effect by better projection of the problem; Risk Factors, Early Detection

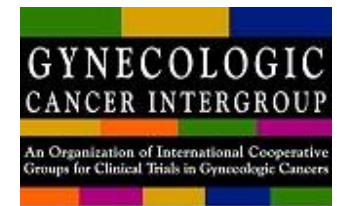
- Tran cultural studies for Disease site Differences : Epidemiology-Predisposing factors –Response to Treatment.
- Enrolment and Collaboration with Different International Societies for Research and Multicentre Trials.



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The NNCI Project

