



Structural Disorder & Neoplasm of the Reproductive Systems

Ferika Indarwati, S.Kep., Ns., MNg, PhD



Contents

Structural disorder of uterus & vagina

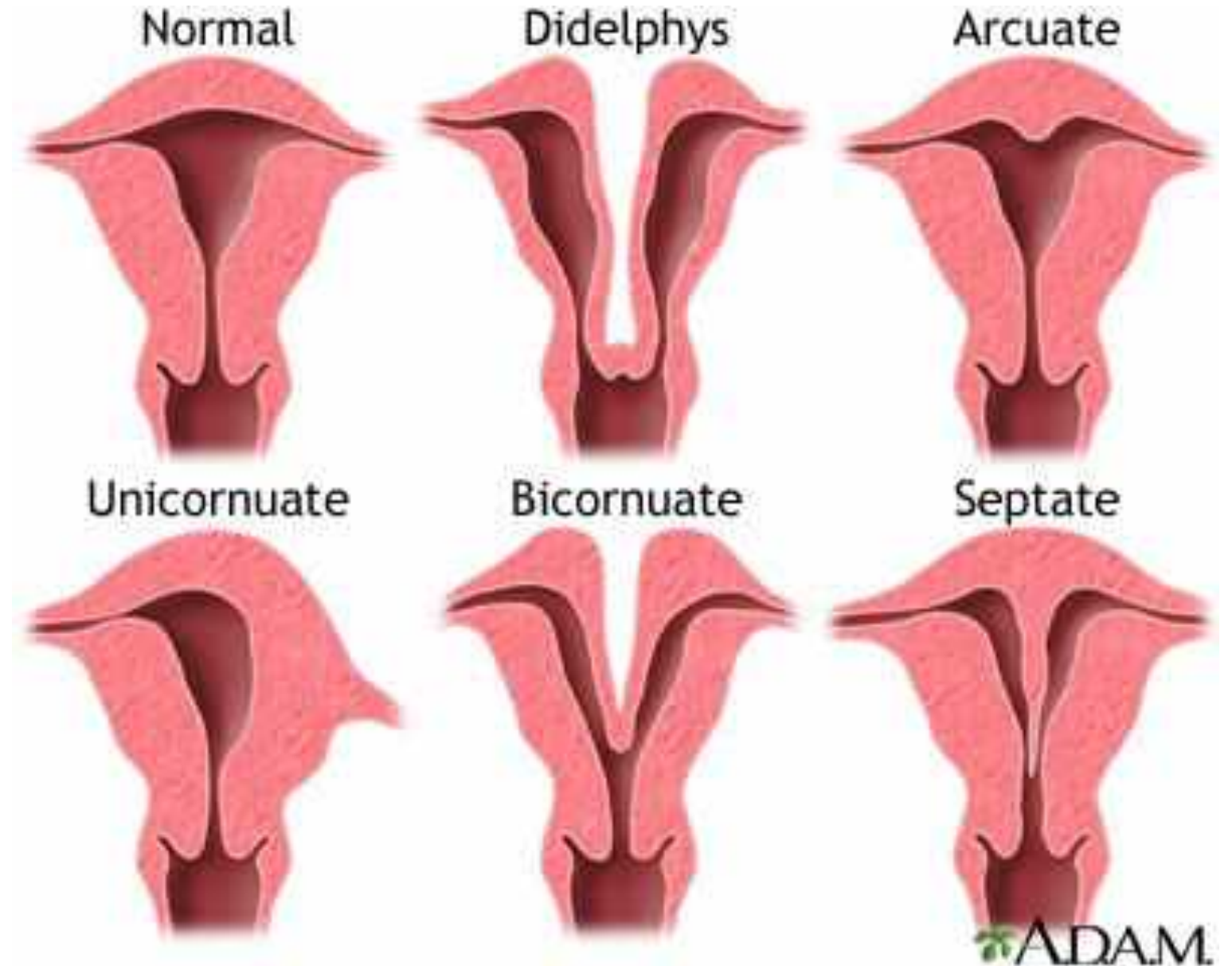
Benign Neoplasms

Malignant Neoplasms

IRK

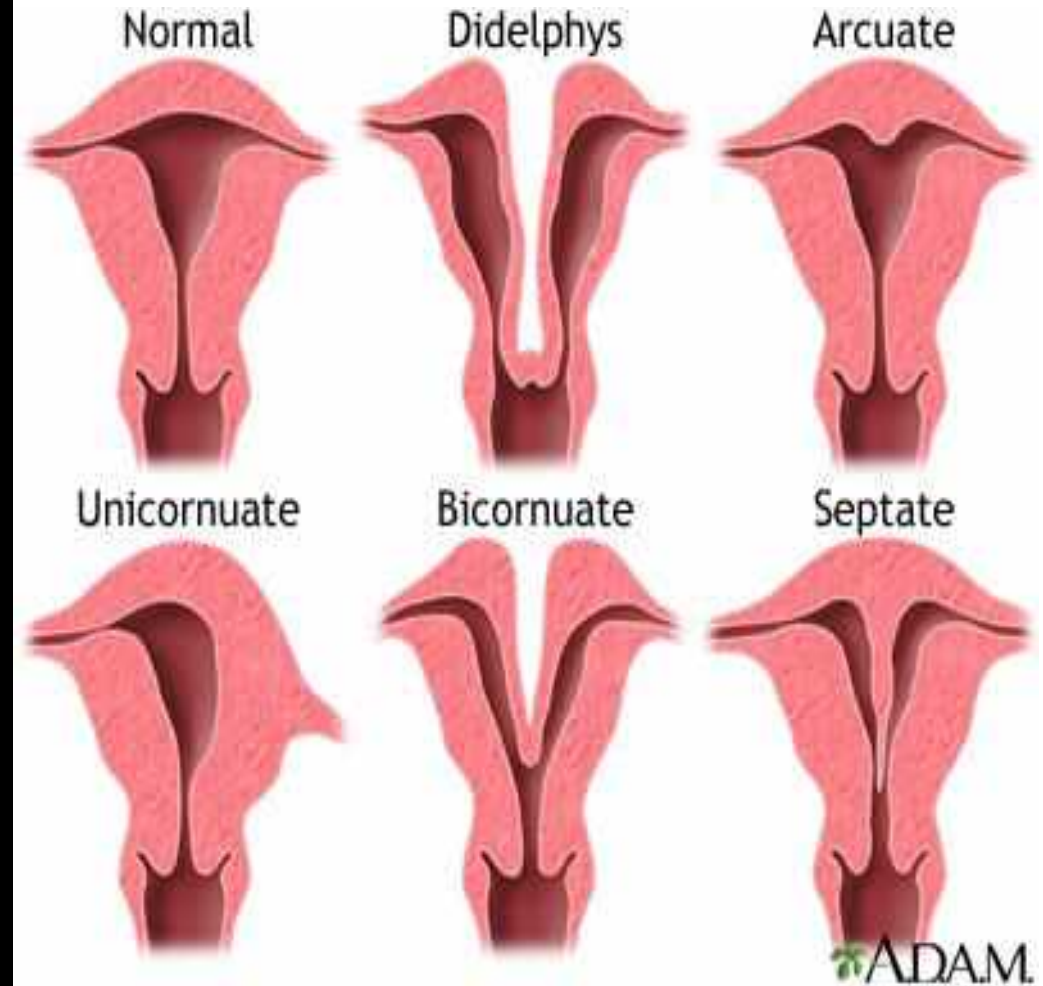


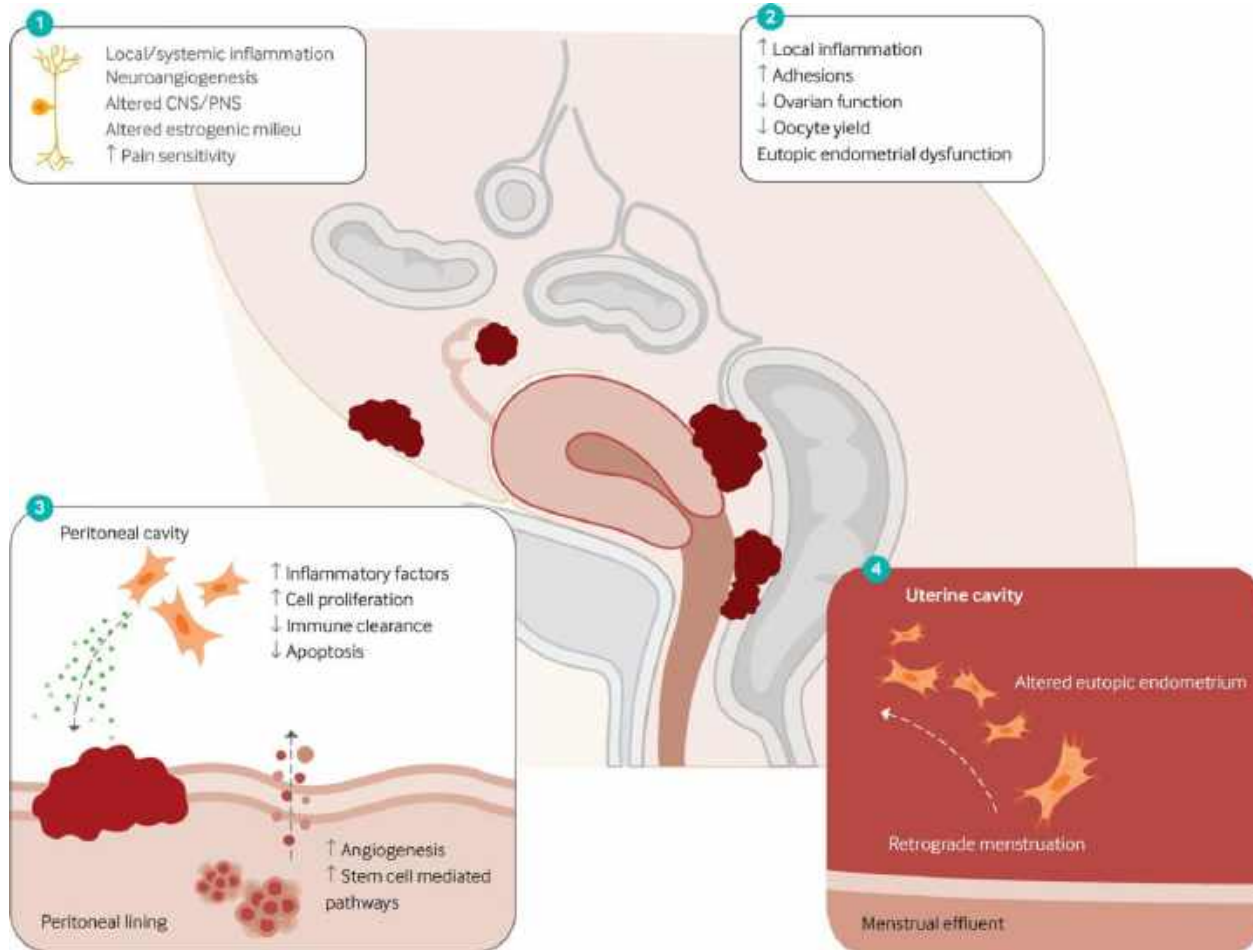
CONGENITAL UTERUS ANOMALY



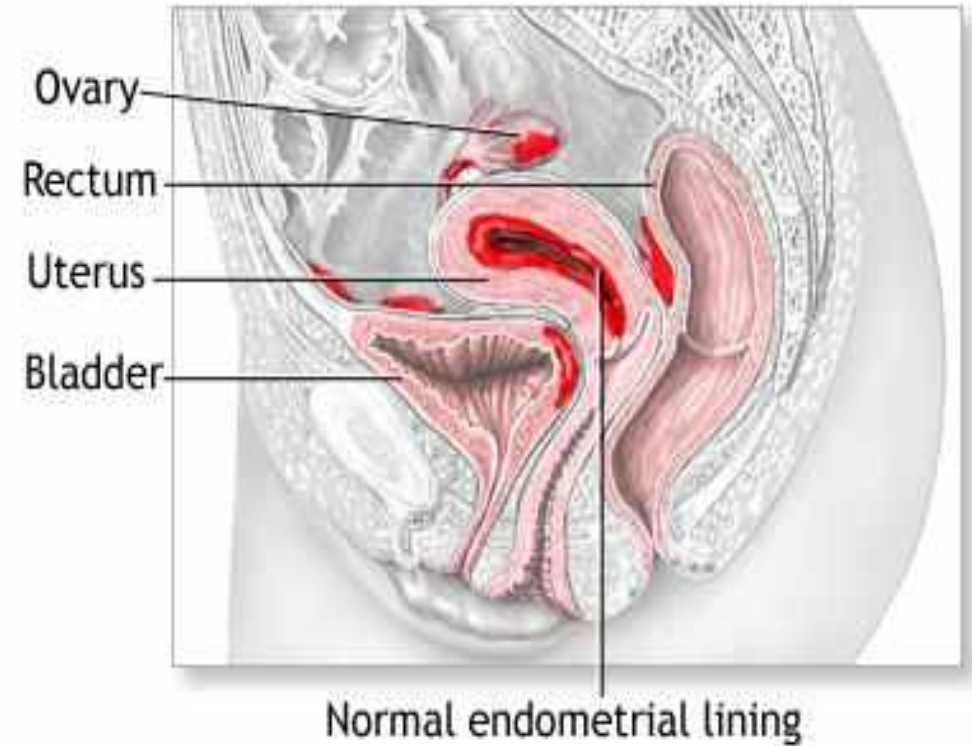
CONGENITAL UTERUS ANOMALY

- Didelphys: The uterus has two separate uterine cavities and cervixes.
- Arcuate: uterus with a dent on the top part
- Unicornate uterus: The uterus is smaller, and there is only one fallopian tube. Sometimes there's a second section that doesn't fully develop.
- Bicornuate: A bicornuate uterus is heart shaped because there are two separate uterine cavities that are completely walled off. However, there is only one cervix and one vagina.
- Septate: A septate uterus is a normal uterine cavity with a wall of fibrous tissue (called the septum) going down the middle of the uterus.





Common sites for endometrial growths in red



ADAM.

STRUCTURAL DISORDER OF THE UTERUS

ENDOMETRIOSIS

- Endometriosis occurs when cells from the lining of your womb (uterus) grow in other areas of your body
- **Symptoms:** pain urination, pain sexual intercourse, pelvic pain, painful periods, heavy vaginal bleeding, vaginal bleeding between periods, and problems getting pregnant (infertility).
- **Effect:** infertility or problems with pregnancy

- **Causes:** unknown, uterus lining cells grow outside the uterus in other parts of your body
- occurs in about 10% of women of reproductive age. May run in families. Starts when a woman begins having periods.

Test

- [Transvaginal ultrasound](#)
- Pelvic [laparoscopy](#)
- Magnetic resonance imaging (MRI)

Treatment

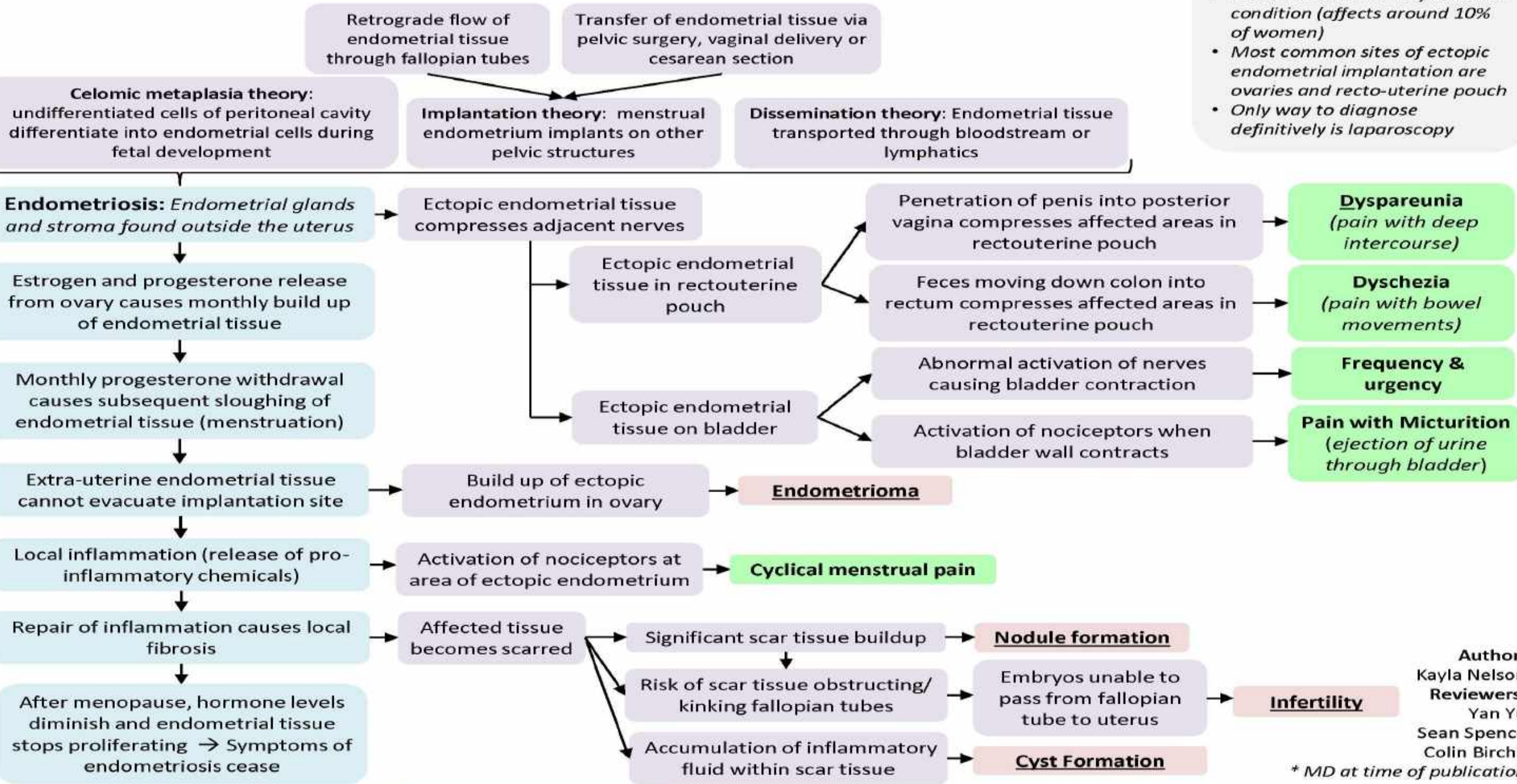
- [Pain relievers](#)
- [Hormon therapy \(Birth control pills, progesterone pills/injection/IUD, Gonadotropin-agonist medicines](#)
- [Surgery](#)

Prognosis

- [Symptoms are commonly stop at menopause](#)

Endometriosis: Pathogenesis and Complications

- Notes:**
- Endometriosis is a very common condition (affects around 10% of women)
 - Most common sites of ectopic endometrial implantation are ovaries and recto-uterine pouch
 - Only way to diagnose definitively is laparoscopy



ADENOMYOSIS/ENDOMETRIOSIS INTERNA

- Adenomyosis is a thickening of the walls of the uterus.
- It occurs when endometrial tissue grows into the outer muscular walls of the uterus.

Symptoms

- In many cases, there are no symptoms. When symptoms occur, they can include:
- Long-term or heavy menstrual bleeding
- Painful menstrual periods, which gets worse
- Pelvic pain during intercourse

- **Causes:** not known
- Most often occurs in women ages 35 to 50 who have had at least one pregnancy.

Test

- Pelvic Exams
- Ultrasound
- MRI

Prognosis

- Symptoms gone after menopause or after removing the uterus

ENDOMETRIAL POLYPS

Symptoms:

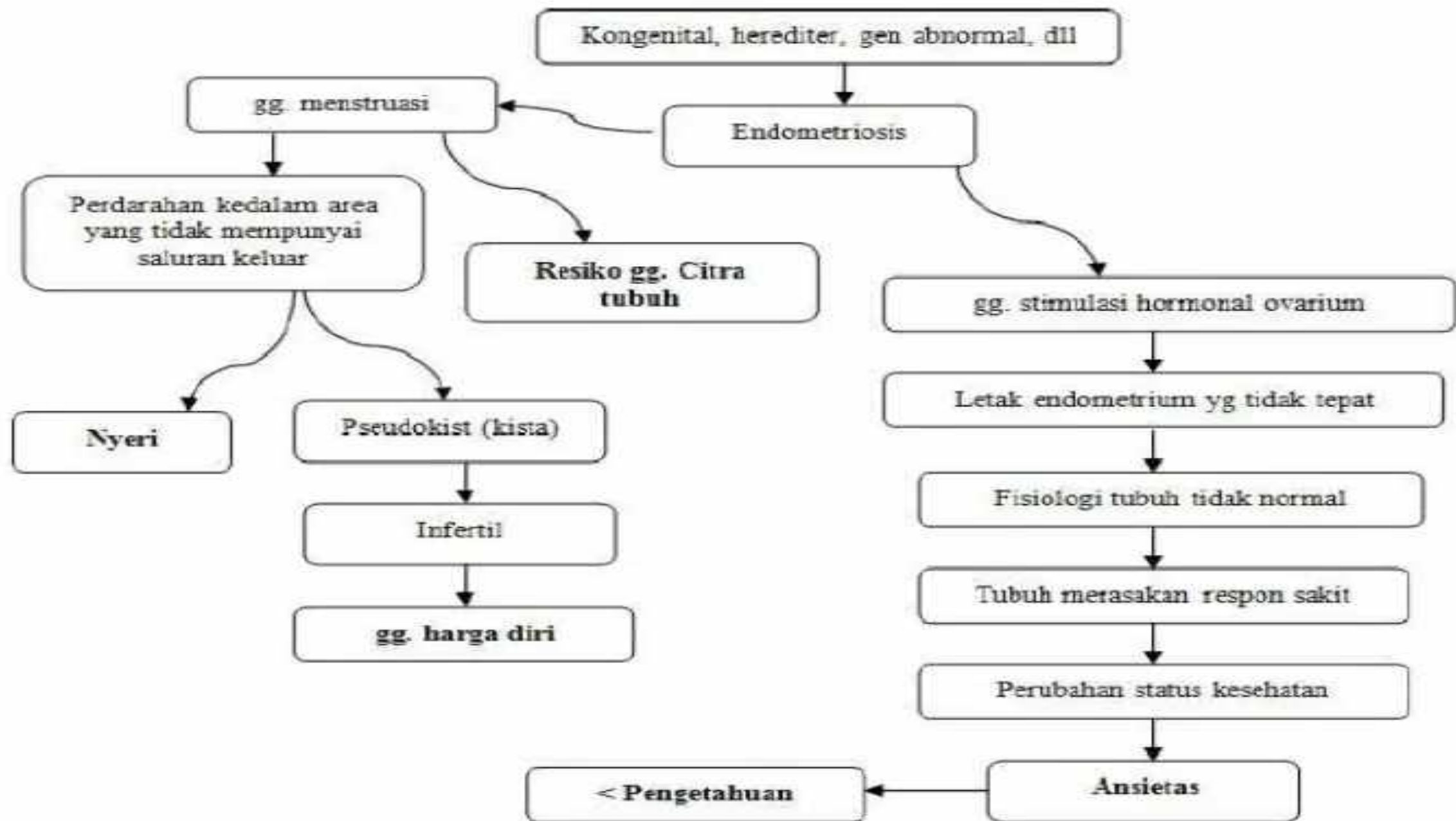
- Menstrual bleeding that is not regular or predictable
- Long or heavy menstrual bleeding
- [Bleeding between periods](#)
- Bleeding from the vagina after menopause
- Trouble getting or staying pregnant ([infertility](#))

Test

- [Transvaginal ultrasound](#)
- [Hysteroscopy](#)
- [Endometrial biopsy](#)
- Hysterosonogram: a specialized type of ultrasound in which fluid is put into the uterine cavity while an ultrasound is performed
- Three-dimensional ultrasound

Treatments:

- Many polyps should be removed because of the small risk for cancer.
- Endometrial polyps are most often removed by a procedure called hysteroscopy.
- a [D and C](#) procedure (Dilation and Curettage) can be done to biopsy the endometrium and remove the polyp.



NURSING CARE FOR ENDOMETRIOSIS

Assessment:

- 1. Pain assessment**
- 2. Menstrual and reproductive history**
- 3. Gastrointestinal & urinary symptoms**
- 4. Psychological assessment**
- 5. Physical examination**
- 6. Quality of life assessment**
- 7. Medication & treatment history**
- 8. Educational needs**

Common Nursing problems:

- 1. Chronic pain**
- 2. Disturbed body image**
- 3. Anxiety**
- 4. Ineffective coping strategy**
- 5. Impaired sexual function**
- 6. Risk for anemia**

Nursing Intervention:

- 1. Pain management**
- 2. Body image promotion**
- 3. Emotional support**
- 4. Family support coping**
- 5. Sexuality counseling**
- 6. Nutrition education**

STRUCTURAL DISORDER OF THE VAGINA

Vaginal anomalies are a category of disorders occurring before birth and involving abnormally formed or absent vaginas

Etiology:

- ❑ Congenital defect
- ❑ Mullerian agenesis

Symptoms:

- ❑ a lack of a menstrual period.
- ❑ abdominal or pelvic pain
- ❑ urinary symptoms
- ❑ difficulty with tampon insertion or vaginal intercourse

- ❑ Vaginal agenesis/atresia is a disorder present before birth in which the vagina stops developing.
- ❑ **Transverse vaginal septum** is a wall of tissue that blocks the vagina
- ❑ **Longitudinal vaginal septum** is a condition where there is a wall of fibrous tissue that divides the vagina into two halves.

Treatments:

- ❑ Surgery

NURSING CARE FOR STRUCTURAL DISORDER

Assessment:

- 1. Pain assessment**
- 2. Menstrual and reproductive history**
- 3. Gastrointestinal & urinary symptoms**
- 4. Psychological assessment**
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Common Nursing problems:

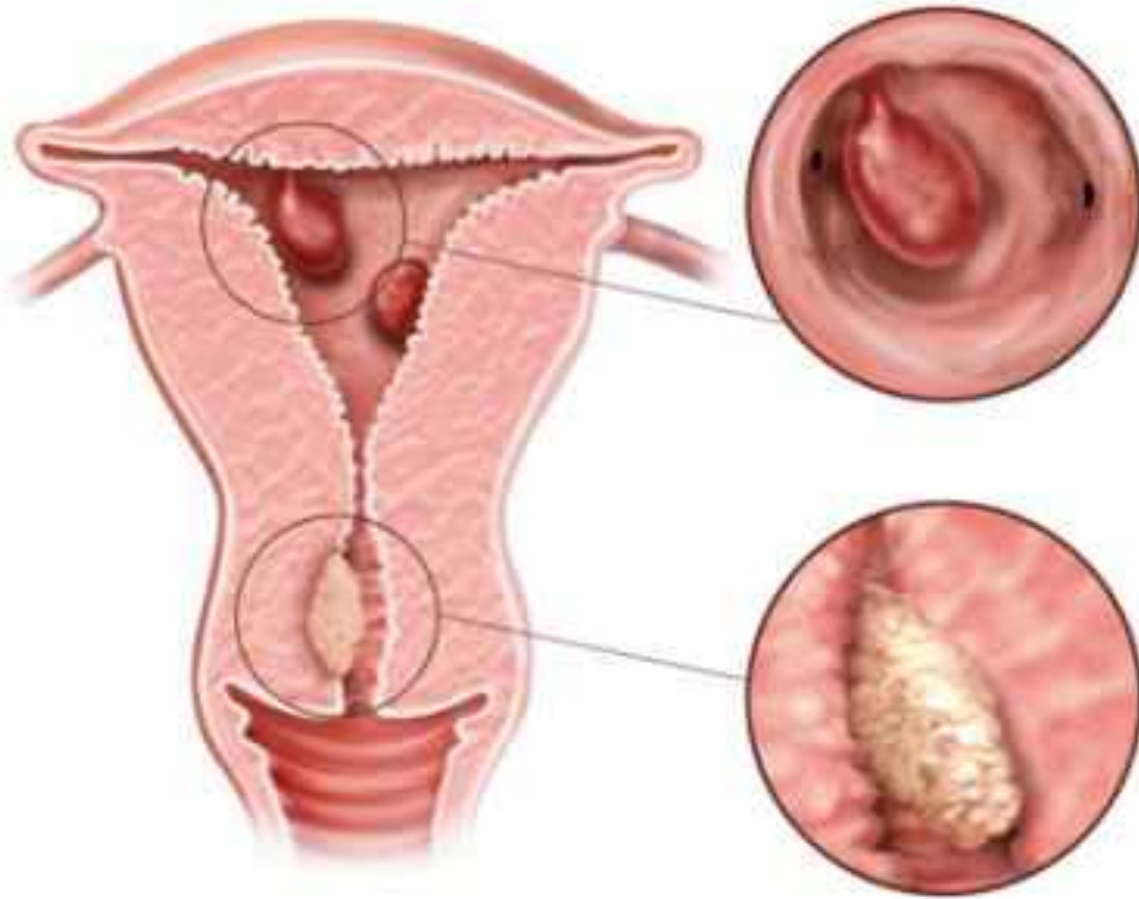
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- 6. Low Self esteem**
- 7. Risk for anemia**
- 8. Risk for infection (after surgery)**

Nursing Intervention:

- 1. Pain management**
- 2. Body image promotion**
- 3. Emotional support**
- 4. Family support coping**
- 5. Sexuality counseling**
- 6. Nutrition education**
- 7. Infection control**

BENIGN NEOPLASM

OVARIAN CYST/KISTA OVARIUM POLYP UTERUS/ENDOMETRIUM/CERVIX



Women should not overlook ovarian cysts

What are ovarian cysts? Ovarian cysts are fluid-filled sacs in an ovary or on its surface.

What are causes of ovarian cysts?

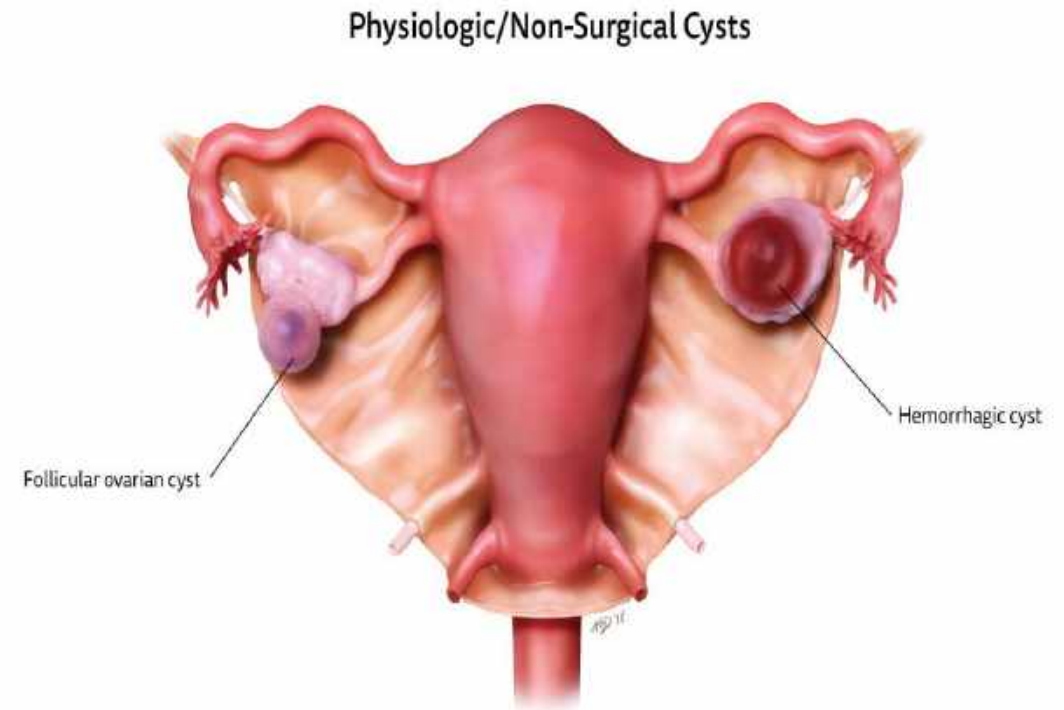
- An egg is not released
- Abnormal ovulation
- Abnormal cell growth in the ovaries

Common warning signs and symptoms

- Painful period
- Pelvic pain
- Heavy menstrual bleeding
- Difficulty urinating
- Frequent urination
- Painful intercourse

OVARIAN CYST

- A **functional ovarian cyst** is a sac that holds a maturing egg: follicular cyst, corpus luteum cyst; Functional cysts are often harmless, without symptoms, and go away without treatment
- **Harmful cysts:** if a cyst becomes large, it can twist, rupture, or bleed, causing pain; e.g: dermoid, cystadenoma, endometrioma



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CAUSES OVARIAN CYST

- **Hormonal problems or drugs** – These help a woman ovulate and may cause functional cysts.
- **Endometriosis** – This can result in the development of a cyst called endometrioma. The endometriosis tissue may attach to the ovary and form a growth. This cyst can be especially painful during sexual intercourse and a woman's period.
- **Pregnancy** – To help support the pregnancy until the placenta forms, an ovarian cyst develops in early pregnancy and may remain even until late in the child-bearing period. It usually needs to be removed.
- **Severe pelvic infections** – Infections may spread to the fallopian tubes and ovaries, causing cysts to form.

OVARIAN CYST

Symptoms of an abnormal cyst include pressure, bloating, swelling, or pain in the lower abdomen on the side of the cyst. This pain may be sharp or dull and intermittent.

Symptoms of a ruptured or large cyst include severe and sudden pain

•COMPLICATIONS:

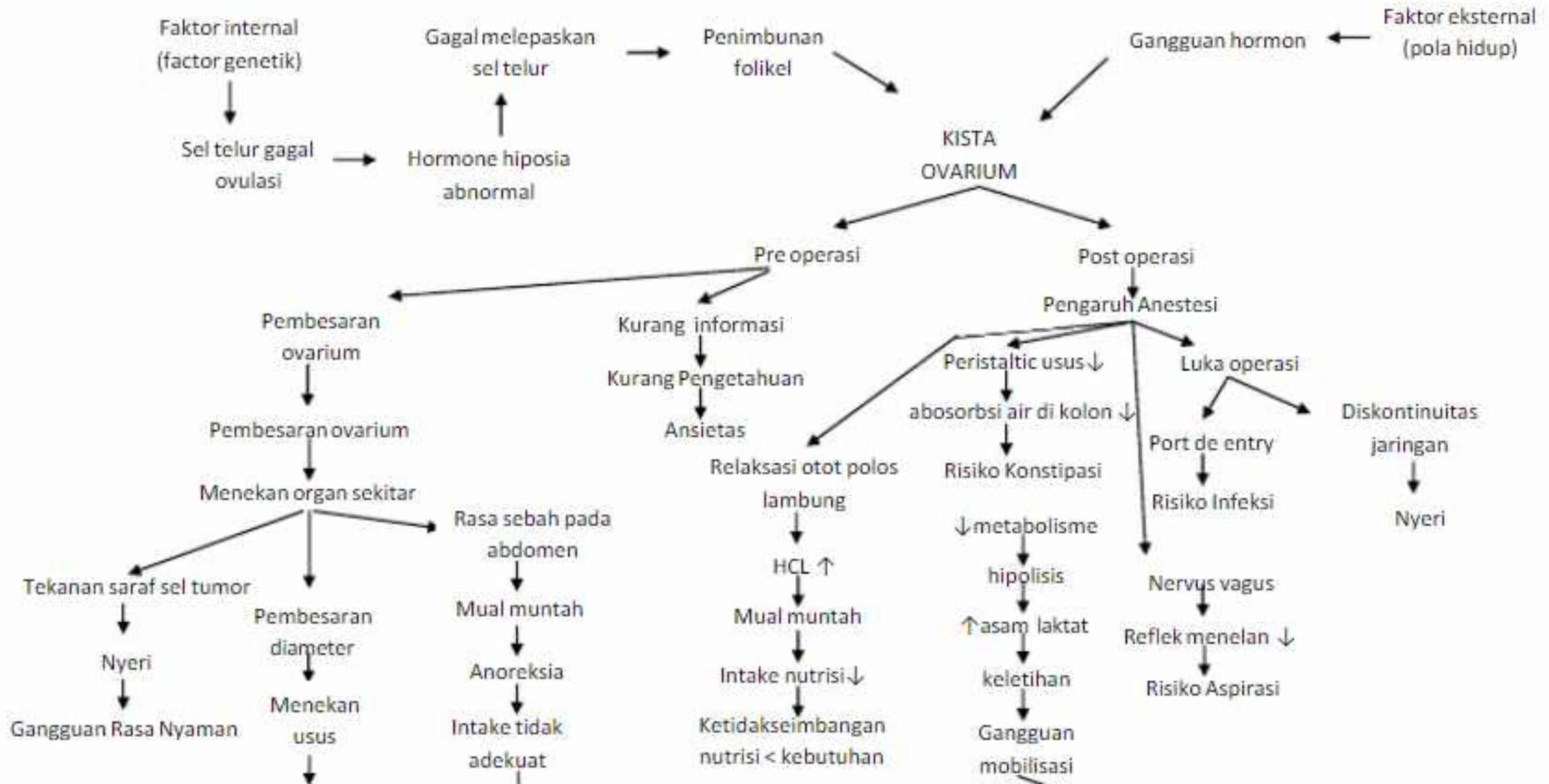
- Ovarian torsion** – Cysts that enlarge can cause the ovary to move, increasing the chance of painful twisting of the ovary.
- Rupture** – A ruptured ovarian cyst can cause severe pain and internal bleeding. Larger cysts have a greater risk of rupture. Vigorous activity affecting the pelvis may also increase the risk.
- Cancer** – Cystic ovarian masses that develop after menopause are possibly cancerous. For this, regular pelvic exams are important.

OVARIAN CYST

- TREATMENTS:
- Birth control pills
- Laparoscopy – small cysts
- Laparotomy – Large cysts
- Ovarian cystectomy – preserve ovarii



OVARIAN CYST



ENDOMETRIAL POLYPS

- Polyps are fingerlike growths that attach to the wall of the uterus
- The exact cause of endometrial polyps in women is not known. They tend to grow when there is more of the hormone estrogen in the body.
- Most endometrial polyps are not cancerous but they can be cancerous or precancerous. The chance of cancer is higher if you are postmenopausal, on tamoxifen, or have heavy or irregular periods.

Risk factors:

- [Obesity](#)

- Tamoxifen, a treatment for breast cancer
- Postmenopausal hormone replacement therapy

- Family history of Lynch syndrome or Cowden syndrome (genetic conditions that run in families)

Endometrial polyps are common in women between 20 to 40 years of age

NURSING CARE FOR BENIGN NEOPLASM

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NURSING CARE FOR BENIGN NEOPLASM

I. Preoperative nursing included below aspects. The patient's emotional and mental state was evaluated comprehensively. A personalized nursing plan was developed according to the evaluation results. Professional nurses communicated with patients patiently, fully understood the patient's mood. surgical knowledge was introduced. The patient was informed about the preoperation precautions such as fasting within 12 hours before the surgery and makes adequate preparations before the surgery.

II. Postoperative nursing was introduced as follows. the rehabilitation environment should be quiet and comfortable. It should closely observe the patient's vital signs and report to the doctor if there is any abnormality. Professional nursing staff would perform posture nursing for the patient. After the patient recovered from anesthesia, the patient was helped to inhale oxygen and do appropriate rehabilitation training to reduce the chance of complications and minimize the length of stay in hospital. Nutrition plan

Perioperative Nursing Management of Patients Undergoing Laparoscopic Ovarian Cystectomy Guided by Ultrasound Imaging under Intelligent Algorithm

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This study was aimed at exploring the application value of ultrasonic imaging-guided laparoscopic ovarian cystectomy after denoising by intelligent algorithms in perioperative nursing intervention of patients. In this study, convolutional downsampling was introduced to the UNet model, based on which the residual structure and Recon module were added to improve the UNet denoising model, which was applied to 100 patients who underwent ultrasound imaging-guided laparoscopic ovarian cystectomy. The patients were grouped into a control group receiving conventional nursing and an experimental group receiving perioperative nursing management. The various experimental indicators were comprehensively evaluated. The results revealed that after denoising using the improved UNet model, the ultrasound image showed no unnecessary interference noise, and the image clarity was significantly improved. In the experimental group, the operation time was 55.45 ± 6.13 days, the intraoperative blood loss was 71.52 ± 9.87 days, the postoperative exhaust time was 1.9 ± 0.73 days, the time to get out of bed was 1.2 ± 0.85 days, the complication rate was 8%, the hospitalization time was 7.3 ± 2.6 days, and the nursing satisfaction rate reached 98%. All above aspects were significantly better than those of the control group, and the differences were statistically significant ($P < 0.05$). In short, the improved UNet denoising model can effectively eliminate the interference noise in ultrasound and restore high-quality ultrasound images. Perioperative nursing intervention can accelerate the recovery speed of patients, reduce the complication rate, and shorten the length of stay in hospital. Therefore, it was worthy of being widely used in clinical nursing.

NURSING CARE FOR BENIGN NEOPLASM

To observe the effect of rapid rehabilitation nursing on the perioperative nursing management of patients with laparoscopic ovarian cyst exfoliation

Qian SUN

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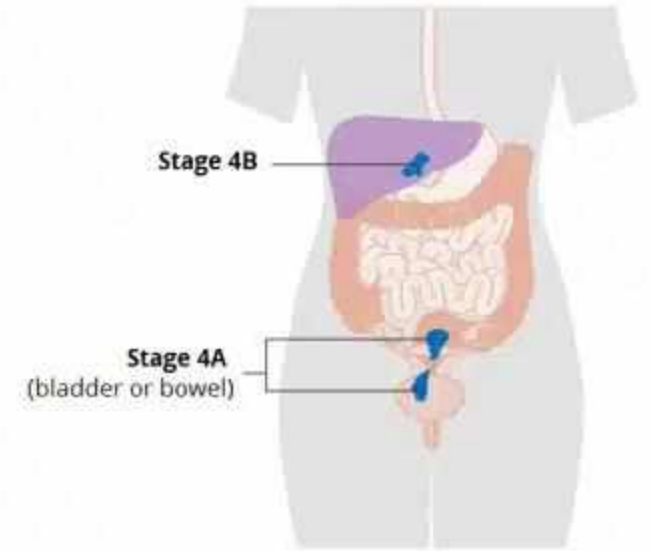
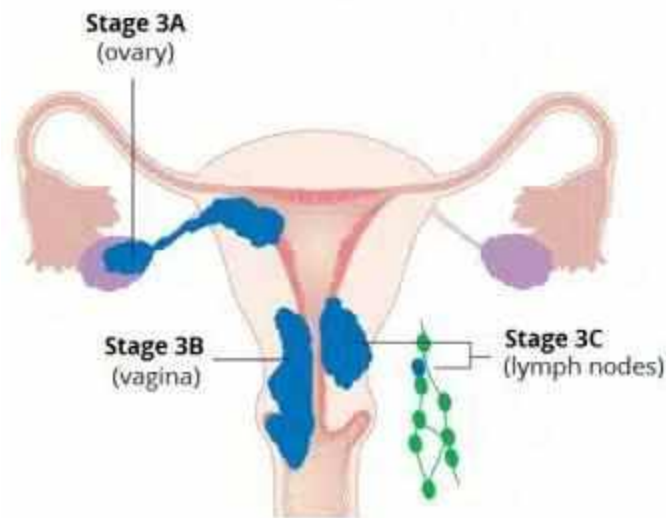
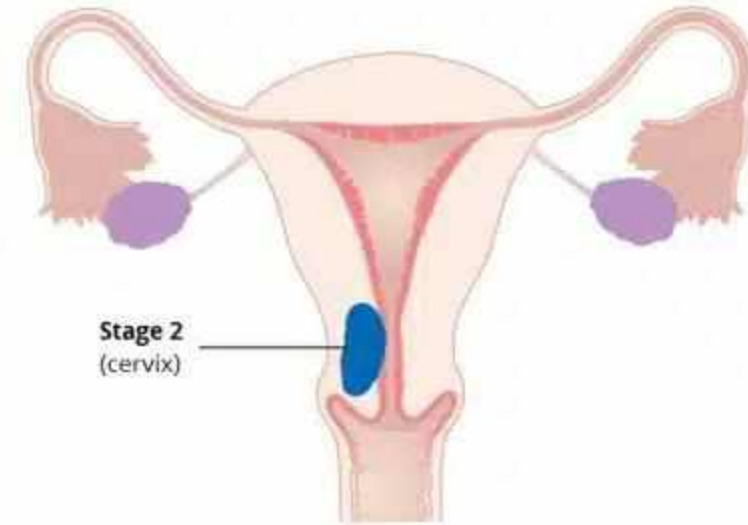
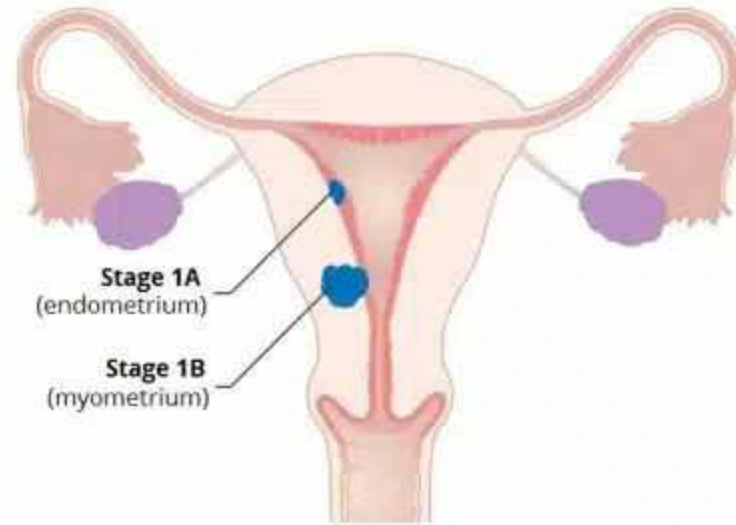
fulin36966@163.com

Keywords Laparoscopy, ovarian cyst dissection, perioperative period, rapid rehabilitation nursing, recovery time, complications; satisfaction

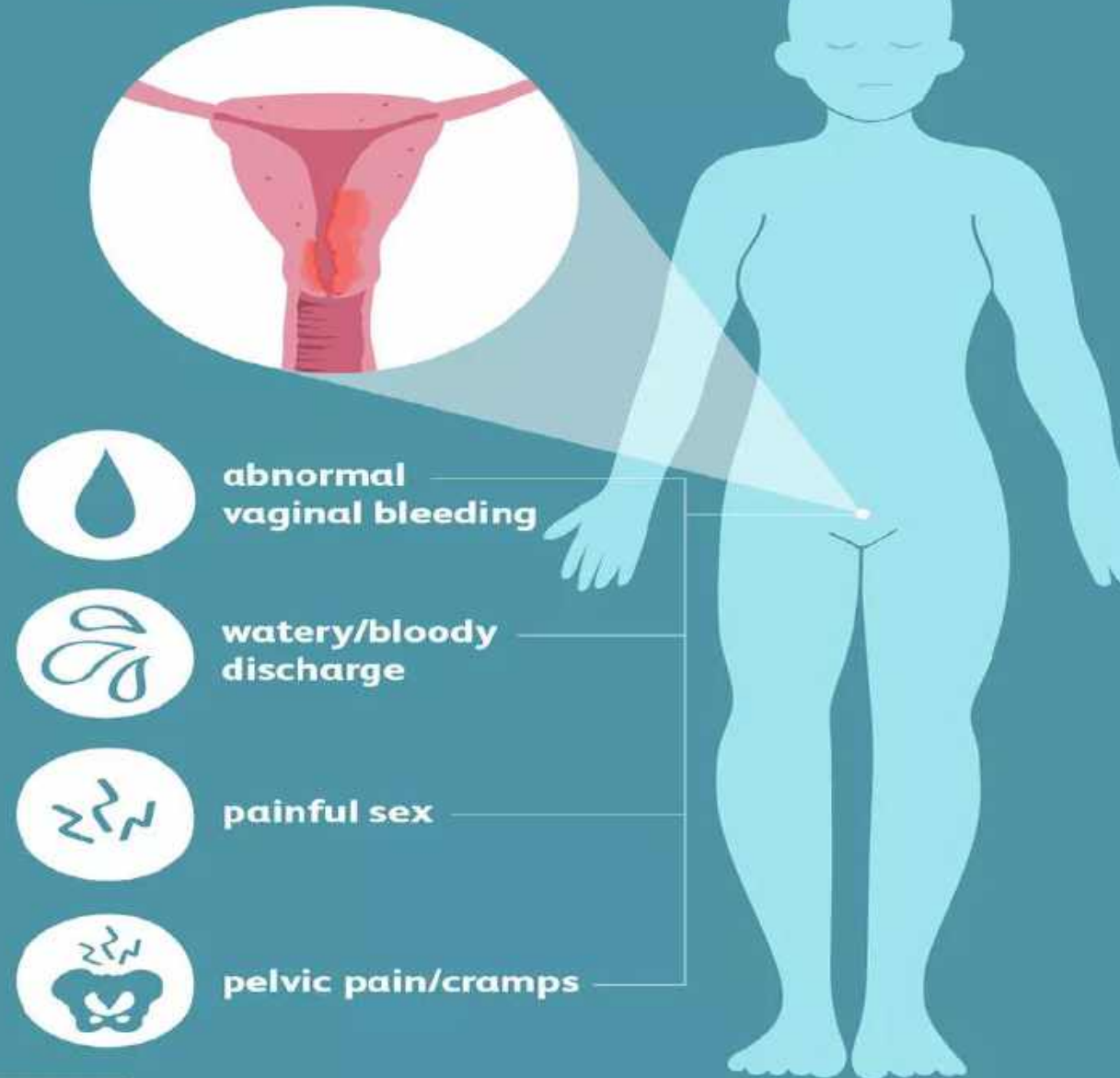
Abstract Objective: To explore the application effect of rapid rehabilitation nursing in perioperative nursing management of patients with laparoscopic ovarian cystectomy. **Methods:** from April 2018 to March 2020, 78 patients with laparoscopic ovarian cyst dissection in our hospital were selected and randomly numbered. They were divided into control group and experimental group, with 39 cases in each group. The former was given routine nursing measures, while the latter was given rapid rehabilitation nursing on the basis of the former, The recovery time, complication rate and nursing satisfaction were compared between the two groups. **Results:** the recovery time of consciousness, the first exhaust time of anus, the time of getting out of bed and the hospitalization time of the experimental group were shorter than those of the control group, $P < 0.05$; the complication rate of the experimental group was 2.56%, lower than 15.38% of the control group, $P < 0.05$; the nursing satisfaction of the experimental group was 94.88%, higher than 79.49% of the control group, $P < 0.05$. **Conclusion:** in the perioperative nursing management of patients with laparoscopic ovarian cyst dissection, rapid rehabilitation nursing can shorten the recovery time of patients, prevent the occurrence of complications, and improve the nursing satisfaction of patients, which is worthy of recommendation.

MALIGNANT: KANKER ENDOMETRIUM

Endometrial cancer is the most common gynecologic malignancy



Common Symptoms



Symptoms:
vaginal bleeding, vaginal discharge, pelvic pains, and pain association with urination and intercourse

MALIGNANT: KANKER ENDOMETRIUM

Endometrial Carcinomas –

Cancerous cells build in the inner lining of the uterus (the endometrium), and endometrial carcinomas are commonly referred to as ‘uterine cancer’ or adenocarcinoma.

Causes

- **Unbalanced estrogen Levels**
- **Obesity**
- **No pregnancy**
- **PCOS**
- **Endometrial hyperplasia**
- **Type 2 DM**

MALIGNANT: KANKER ENDOMETRIUM

TEST

- ☐ Pelvic Exam
- ☐ Transvaginal USG
- ☐ Endometrial biopsy
- ☐ Dilation & Curettage

Treatment

- ☐ Surgery
- ☐ Radiation therapy
- ☐ Hormone therapy
- ☐ Chemotherapy

MALIGNANT: KANKER ENDOMETRIUM

Cancer prevention, response to treatment, and quality of life can be affected by lifestyle factors, including nutrition, exercise, and tobacco use. Nurses in diverse roles and practice settings can educate patients about lifestyle choices that can affect individuals across the cancer trajectory

<https://doi.org/10.1016/j.soncn.2019.02.002>

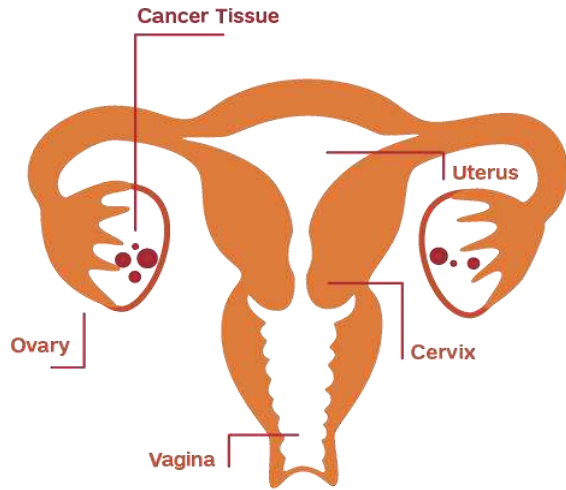
OVARIAN CANCER/KANKER OVARIII

Types

- **Epithelial ovarian carcinomas → most prevalent type 85% – 90%**
- **Germ cell tumors → less than 2% of all ovarian cancer cases**
- **Stromal cell tumors → 1% of all ovarian cancers and originates in the tissues supporting the ovaries**

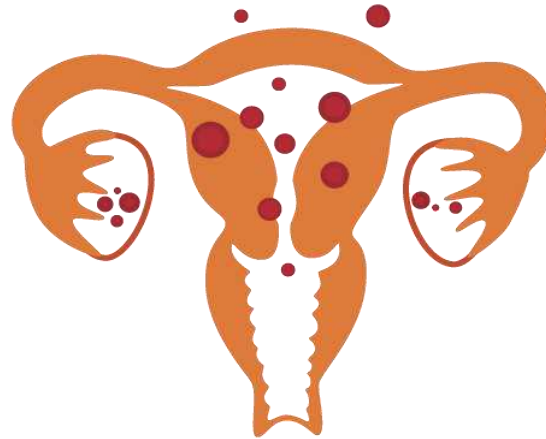
Ovarian Cancer

Stage 1



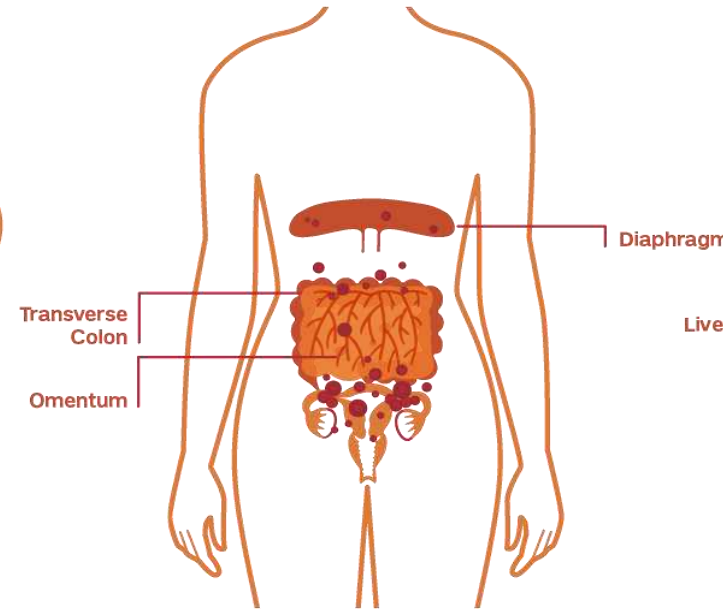
Cancer is found in one or both ovaries.

Stage 2



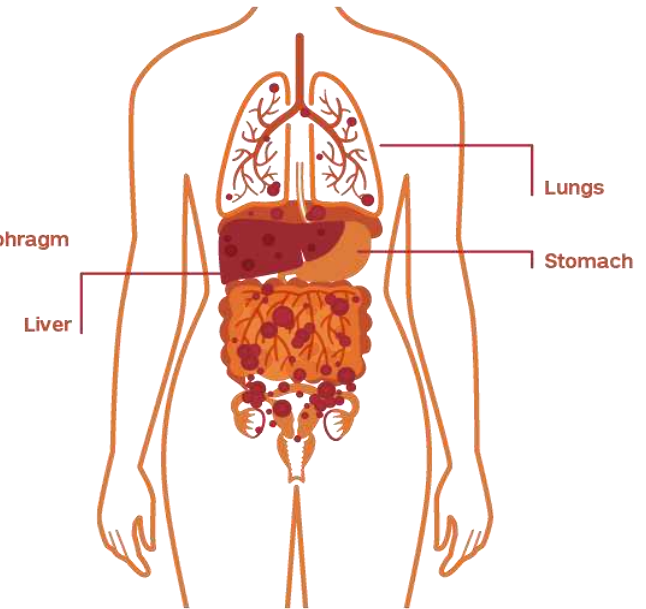
Cancerous cells have spread from the ovaries to other parts of the pelvis, such as the fallopian tubes or uterus.

Stage 3



Cancerous cells have spread outside the pelvis to the nearby lymph nodes, diaphragm, intestines, or liver.

Stage 4



The cancer has spread beyond the abdomen, such as to the lungs or spleen.

KANKER OVARI

Causes

- **Effect of frequency of ovulation. Birth control pills and pregnancy both reduce the risk of ovarian cancer.**
- **Effect of tubal ligation and hysterectomy. Hysterectomy and tubal ligation both reduce the risk of ovarian cancer.**
- **Presence of androgens. Androgens, which are produced by men, are thought to be a potential cause of ovarian cancer**

KANKER OVARI

Symptoms

- Abdominal bloating or swelling
- Unintentional weight loss
- Changes in bowel habits: constipation
- Pain
- Vaginal bleeding
- dyspareunia

Ovarian Cancer

Early Stage Symptoms



frequent urination



abdominal bloating



feeling full quickly when eating



pelvic pain

Advanced Stage Symptoms



changes in bowel habits



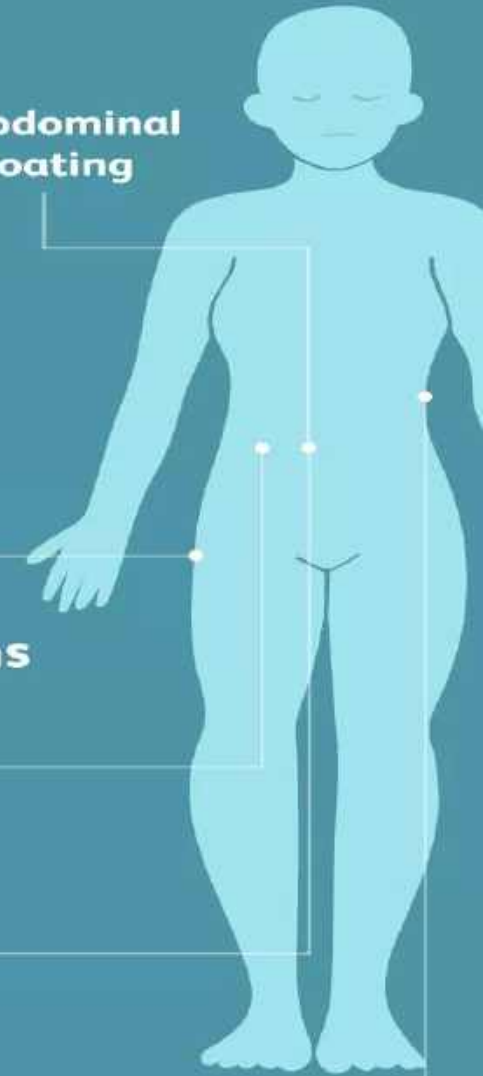
fluid collection



pain with intercourse



back pain



KANKER OVARI

Risk factors

- **Age. Ovarian cancer primarily affects postmenopausal women**
- **Parity - parity has a protective effect**
- **Family history**
- **Reproductive history – Birth control low. Fertility medication high**
- **BMI**
- **Ethnicity – white – black – Hispanic - asian**

KANKER OVARI

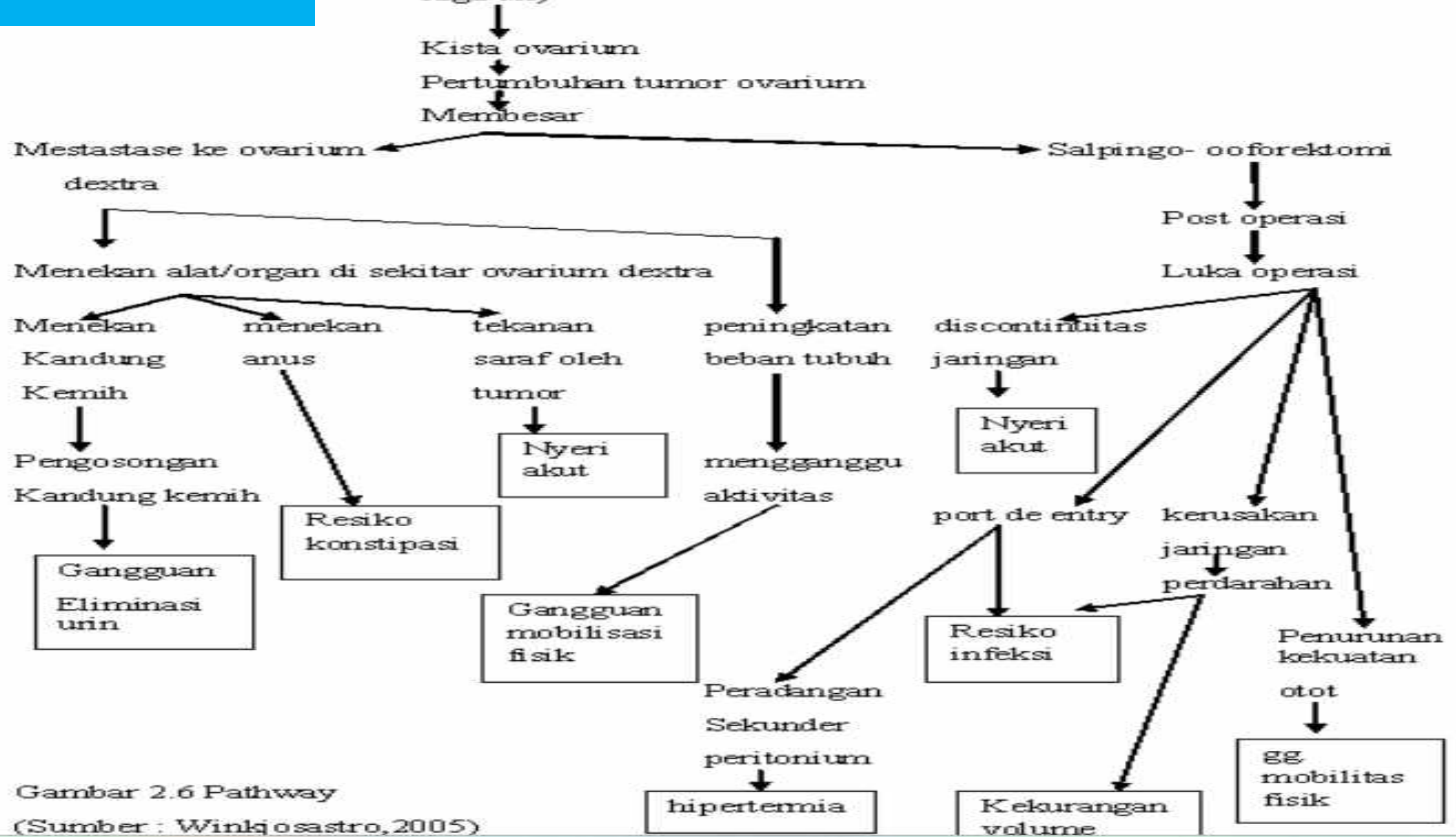
Complication

- Ascites
- Pleural effusion
- Bowel and bladder obstruction
- Disorders of nutrition



KANKER OVARIUM

- Ketidakseimbangan estrogen+progesteron,
- Pertumbuhan folikel yang tidak terkontrol
- Degenerasi ovarium,
- Gaya hidup tidak sehat (konsumsi alkohol, merokok, kurang olah raga dll)



Gambar 2.6 Pathway

(Sumber : Winkjosastro, 2005)

NURSING CARE

Assessment

- Pain assessment
- Reproductive history
- Gastrointestinal & urinary symptoms
- Psychological assessment
- Physical examination
- Quality of life assessment
- Medication & treatment history
- Educational needs

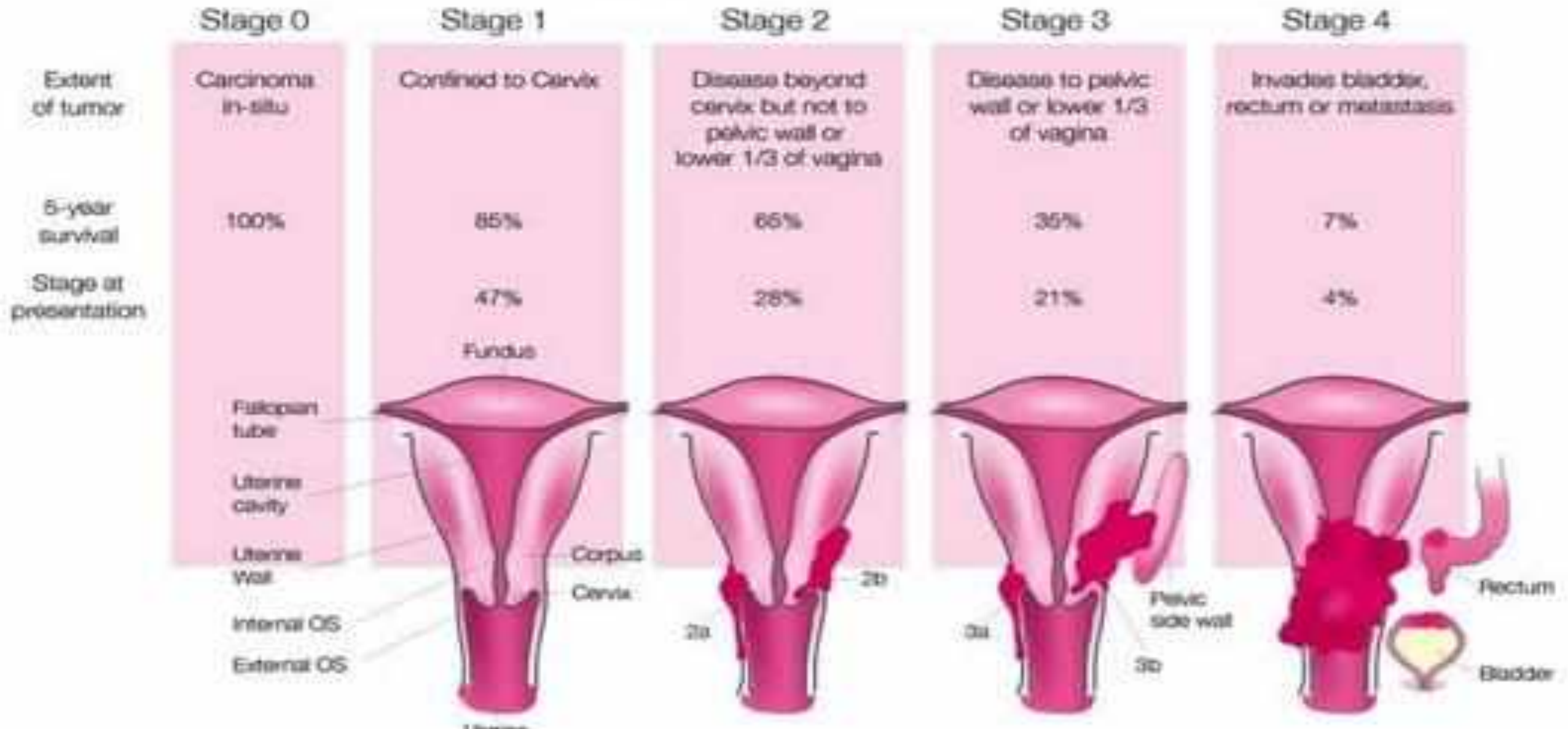
Nursing Problems

- Fear/Anxiety
- Anticipatory grieving
- Imbalanced Nutrition: Less Than Body requirement
- Nausea
- Fatigue
- Urine elimination disturbance
- Risk for infection
- Pain
- Risk of bleeding

Intervention

- Anxiety management
- Nausea management
- Family support
- Energy conservation
- Nutrition management
- Pain management
- Infection control
- Bleeding control

CERVICAL CANCER/KANKER SERVIK



CERVICAL CANCER STAGES

- Kanker Serviks Stadium 0 : sel-sel kanker terbatas pada permukaan serviks. Tahap ini juga disebut karsinoma in situ (CIS) atau cervical intraepithelial neoplasia (CIN) grade III (CIN III). Tidak ada gejala sama sekali pada stadium 0 ini.
- Kanker Serviks Stadium 1 : kanker telah tumbuh lebih dalam ke leher rahim, namun belum menyebar ke luar.
 - ✓ Stadium 1A: Ukuran kanker masih kecil kurang dari 5 mm (dalam) dan lebar kurang dari 7 mm, hanya bisa dilihat di bawah mikroskop.
 - ✓ Stadium 1B: Kanker dapat dilihat secara kasat mata dan ukuran 4 cm atau kurang; atau kanker hanya dapat dilihat di bawah mikroskop dengan ukuran lebih dari 5 mm (dalam) dan 7 mm (lebar).

CERVICAL CANCER STAGES

- Kanker Serviks Stadium 2 : kanker telah tumbuh melampaui leher rahim dan rahim, tetapi belum mencapai dinding panggul atau bagian bawah vagina.
 - ✓ Stadium 2A: Kanker belum menyebar ke jaringan yang berada di samping leher rahim, parametrium, tetapi mungkin telah tumbuh di bagian atas vagina.
 - ✓ Stadium 2B: Kanker telah menyebar ke jaringan yang berada di samping leher rahim (parametrium).
- Kanker Serviks Stadium 3 : kanker telah menyebar ke bagian bawah vagina atau dinding panggul, tetapi tidak ke kelenjar getah bening terdekat atau bagian lain dari tubuh.
 - ✓ Stadium 3A: Kanker telah menyebar ke sepertiga bagian bawah vagina, tetapi tidak ke dinding panggul.
 - ✓ Stadium 3B: Kanker telah tumbuh ke dalam dinding panggul dan / atau telah memblokir kedua ureter, namun belum menyebar ke kelenjar getah bening atau tempat yang jauh

CERVICAL CANCER/KANKER SERVIK

- Kanker Serviks Stadium 4 : Pada stadium lanjut ini, kanker telah menyebar ke organ terdekat atau bagian tubuh lainnya. Stadium 4 dibagi menjadi dua subkategori :
 - Stadium IVA: kanker telah menyebar ke kandung kemih atau rektum, tetapi tidak ke kelenjar getah bening atau tempat yang jauh.
 - Stadium IVB: kanker telah menyebar ke organ di luar panggul, seperti paru-paru atau hati.

CERVICAL CANCER SYMPTOMS



Unusual vaginal bleeding



Change in vaginal discharge



Pain during sex



Lower back or pelvic pain



Persistent UTIs



Constipation

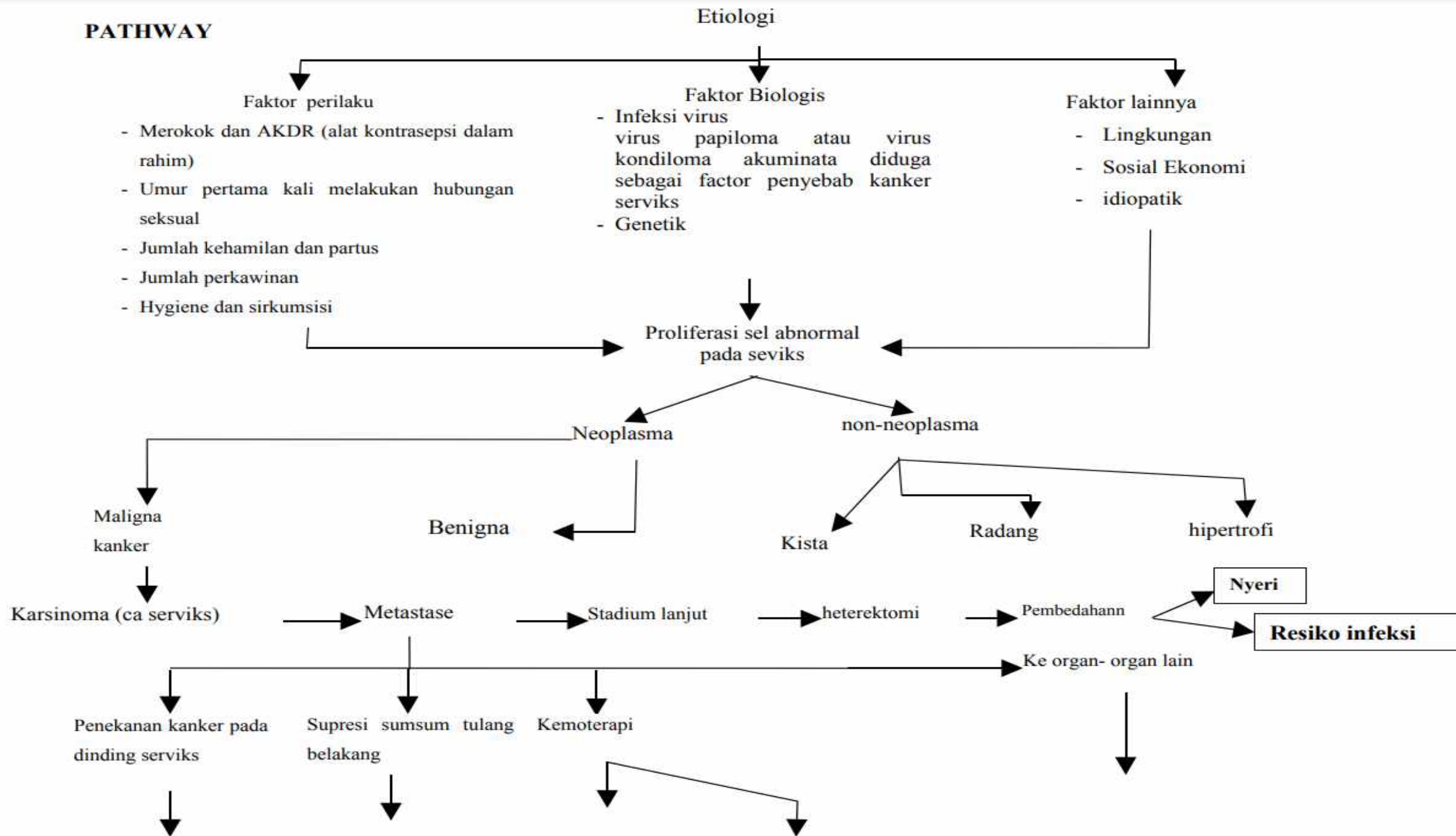


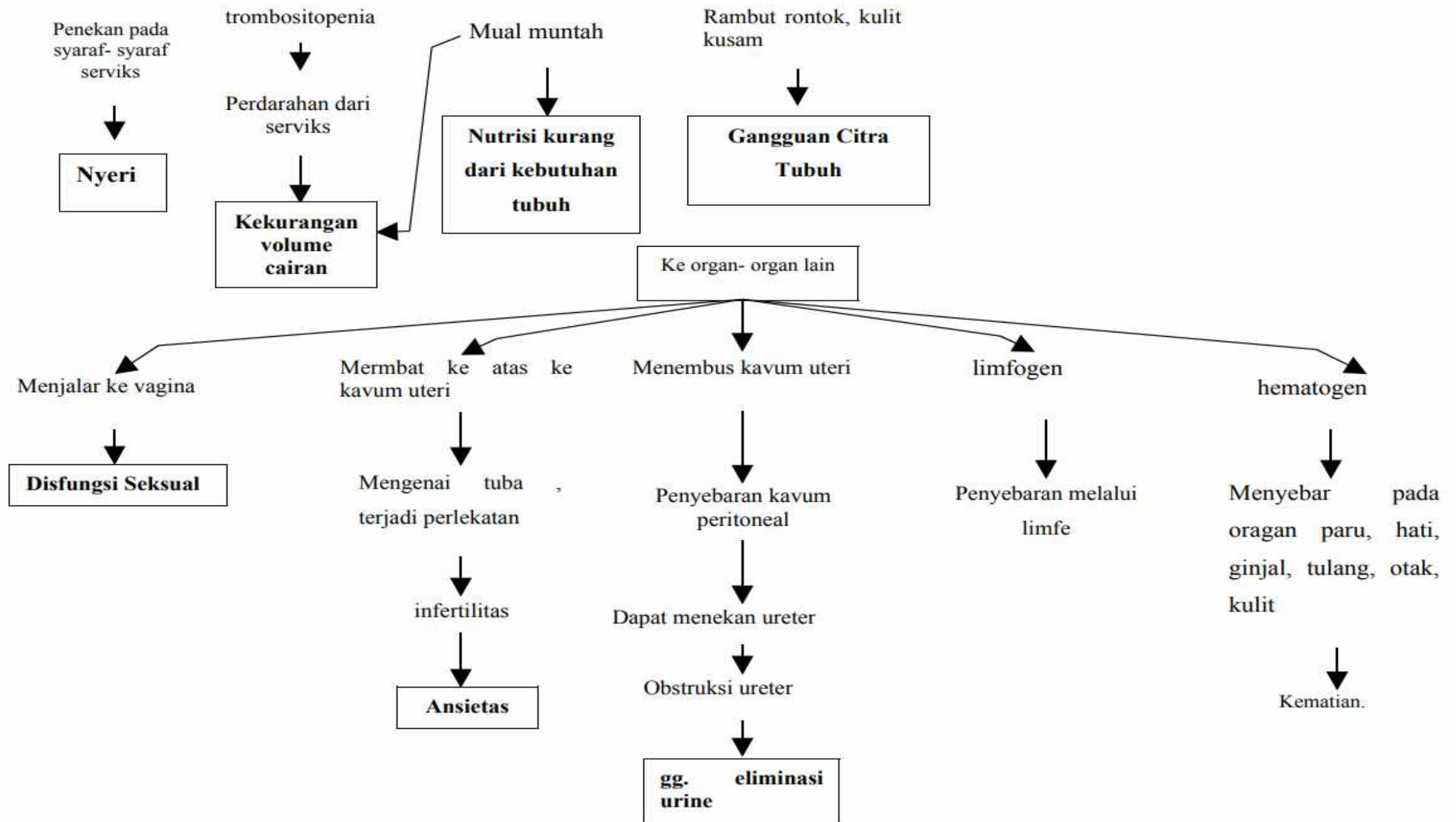
Leg swelling



Bone pain

PATHWAY





NURSING CARE



Assessment

Pain assessment

Reproductive history

Gastrointestinal & urinary symptoms

Psychological assessment

Physical examination

Quality of life assessment

Medication & treatment history

Educational needs

Nursing Problems

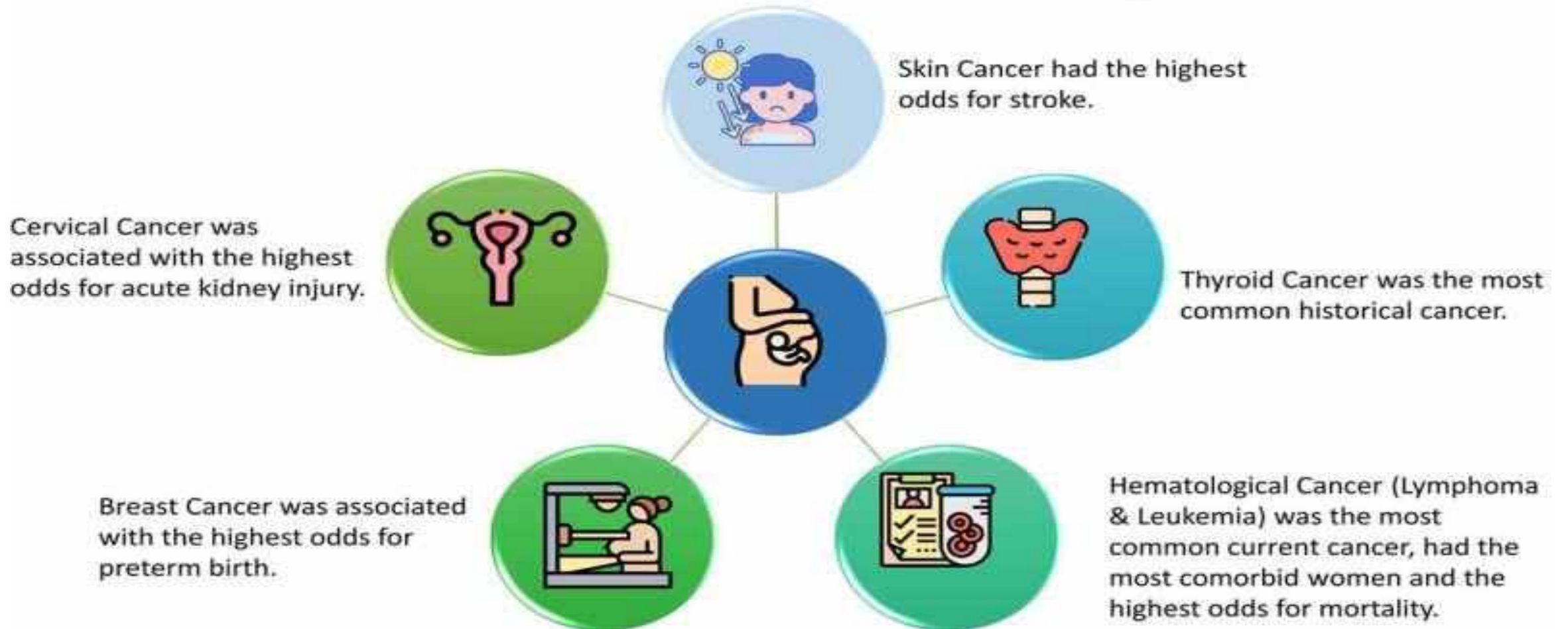
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- Risk of bleeding

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CANCER & PREGNANCY

Five Most Prevalent Cancer Diagnoses in Pregnant Women



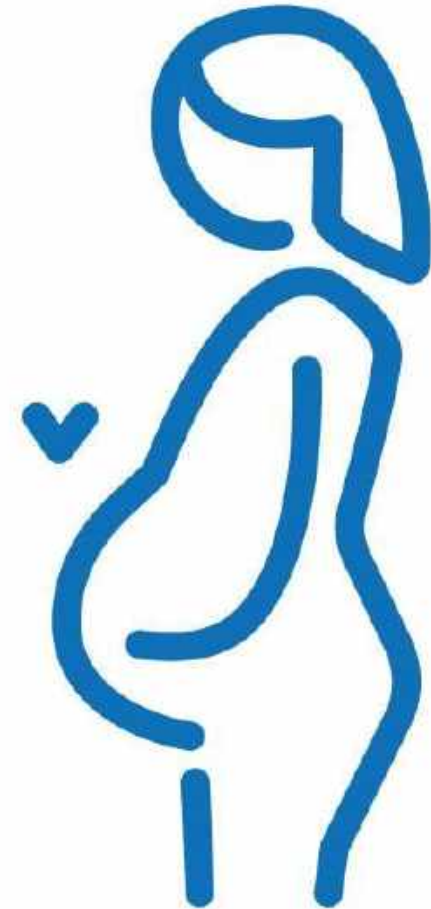
CANCER & PREGNANCY

- Cancer during pregnancy is often rare but it is a serious condition. It is estimated that only 1 in 1000 women is affected by cancer
- Cancers such as melanoma or leukaemia have been known to spread from the placenta to the fetus, leading to severe health complications for both mother and child. In addition, certain types of cancer treatments may also cause harm to the developing fetus, including radiation and chemotherapy
- Misconception that ending a pregnancy improves the chances of a mother's survival in case of cancer

CANCER & PREGNANCY

Treatment options:

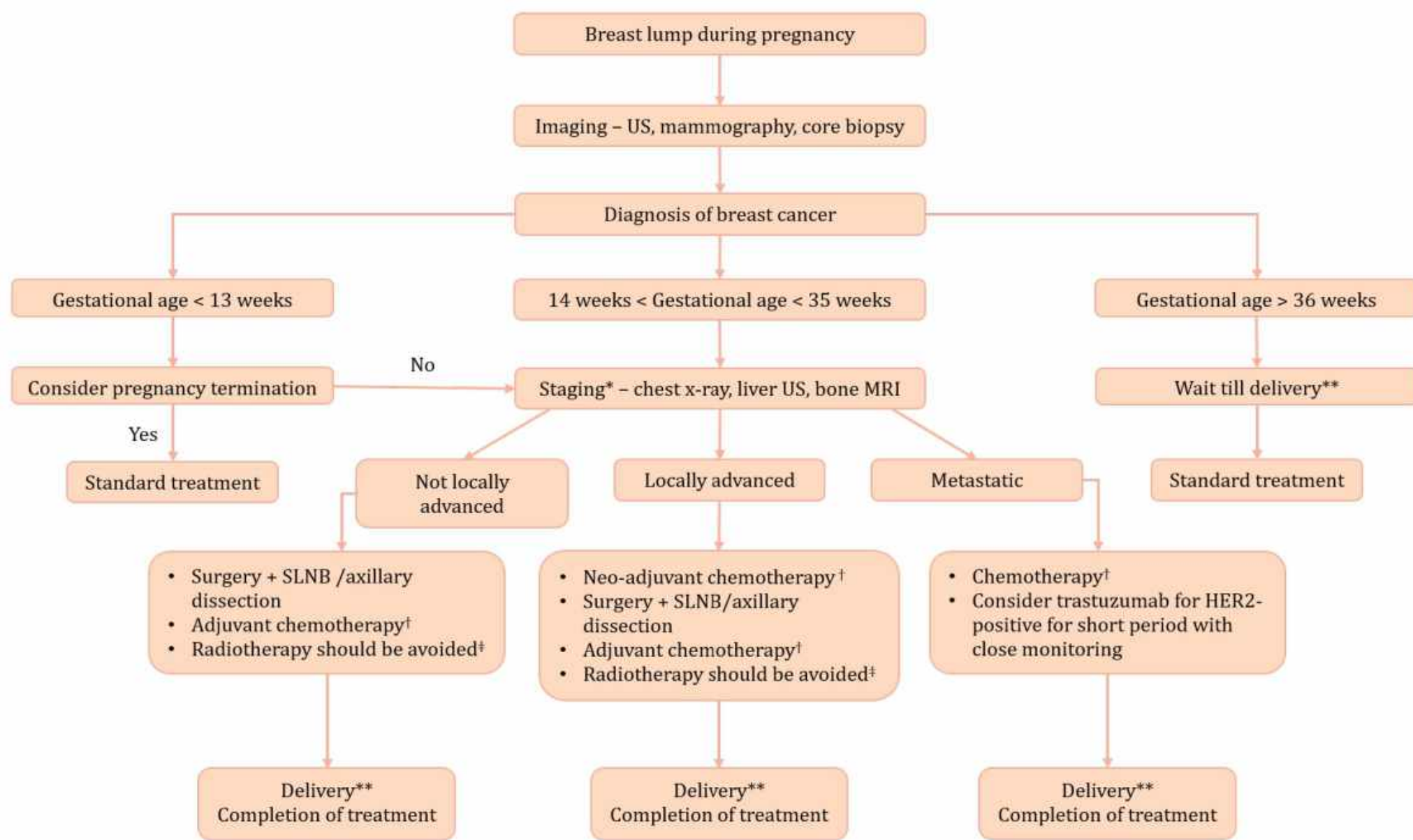
- Targeted therapies, chemotherapy and radiation therapy.
- The type and stage of cancer, as well as the patient's age, and overall health, play an important role in deciding on a treatment plan.
- With careful planning and management, it is possible to successfully treat cancer while pregnant without putting the baby at risk.



PREGNANCY & CANCER

POSMAT

CANCER & PREGNANCY



* Indicated only when might alter clinical management

** Avoiding iatrogenic preterm delivery is recommended

† Allowed only when gestational age is between 14 and 35 weeks

‡ Radiotherapy may be considered in highly selected patients before 20 weeks' gestation

IRK

Reciting and believing in the Quran will also cure all your illnesses. As it is mentioned in the Quran,

وَنُنَزِّلُ مِنَ الْقُرْآنِ مَا هُوَ شِفَاءٌ وَرَحْمَةٌ لِّلْمُؤْمِنِينَ

And We send down the Qur'ān that is healing and mercy for the Believers.

(AlQuran 17:82)

Muslim use Zamzam water to cure many diseases. It is the cure of many diseases and disorders by order of Allah.

The Prophet (Peace be upon him) said:

“Zamzam water is what one intends to drink it for. When one drinks it to be healed, Allah heals him; when one drinks it to be full, Allah makes him full. and when one drinks it to quench his thirst, Allah quenches it.” [Ahmad and Ibn Majah]

‘Honey is a remedy for every illness, and the Qur'an is a remedy for all illness of the mind. therefore I recommend to you both remedies, the Qur'an and Honey.’

(Bukhari)

Original Article

Antiproliferative and apoptotic effects of the natural alkaline water (Zamzam) in breast cancer cell line MCF-7

ABSTRACT

Background: Zamzam water (ZW) is a natural alkaline water that contains several minerals that may represent a powerful tool for cancer therapy.

Objectives: In this research, *in vitro* antiproliferative and apoptotic effects of ZW were investigated in the human breast cancer cell line MCF-7.

Materials and Methods: This study was conducted between January 2015 and February 2016. The effects of ZW on the morphology and the cell viability of human breast cancer cell line MCF-7 were determined. The cell death type and cell cycle changes were investigated using flow cytometry. Finally, reactive oxygen species (ROS) were also measured by fluorometric technique.

Results: MCF-7 cells treated with either ZW with adjusted pH at 7.2 or unadjusted pH at 8 showed reduced cell viability of cancerous cells. The cell death occurred through the apoptosis pathway under both treatment conditions. The treated MCF-7 cells were arrested in the G2/M phase and decreased in the G1 phase. Only the unadjusted pH ZW sample demonstrated an increase in the production of both cytoplasmic and mitochondrial ROS in MCF-7 cells.

Conclusion: All the results in the present study indicated, for the first time, that ZW might have anticancer and apoptotic effects on breast cancer cell line.

KEY WORDS: Antiproliferation, apoptosis, cell cycle, MCF-7, reactive oxygen species, Zamzam water

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Review

Honey and cancer: A mechanistic review

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SUMMARY

Background: Globally, cancer ranks among the most common causes of death. Multiple experimental and clinical studies have investigated anticancer effects of honey with promising results. This study focused on potential background mechanisms of this effect.

Methods: The current literature was reviewed for potential anticancer pathways which are suggested for honey and its ingredients.

Results: Flavonoids (kaempferol, catechin, and quercetin) and phenolic acids (caffeic acid and gallic acid) are the most important ingredients of honey with known anti-cancer activity. The main suggested mechanisms for anti-cancer activity of honey and its ingredients are antioxidant, apoptotic, tumor necrosis factor inhibiting, antiproliferative, immunomodulatory, anti-inflammatory and estrogenic effects.

Conclusion: This review collates the current scientific understanding on the mechanism of anti-cancer activity of honey.

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Adapting Participatory Workshops to a Virtual Setting: Co-Design With Muslim Women of a Faith-Based Intervention to Encourage Cancer Screening Uptake

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IRK

Abstract

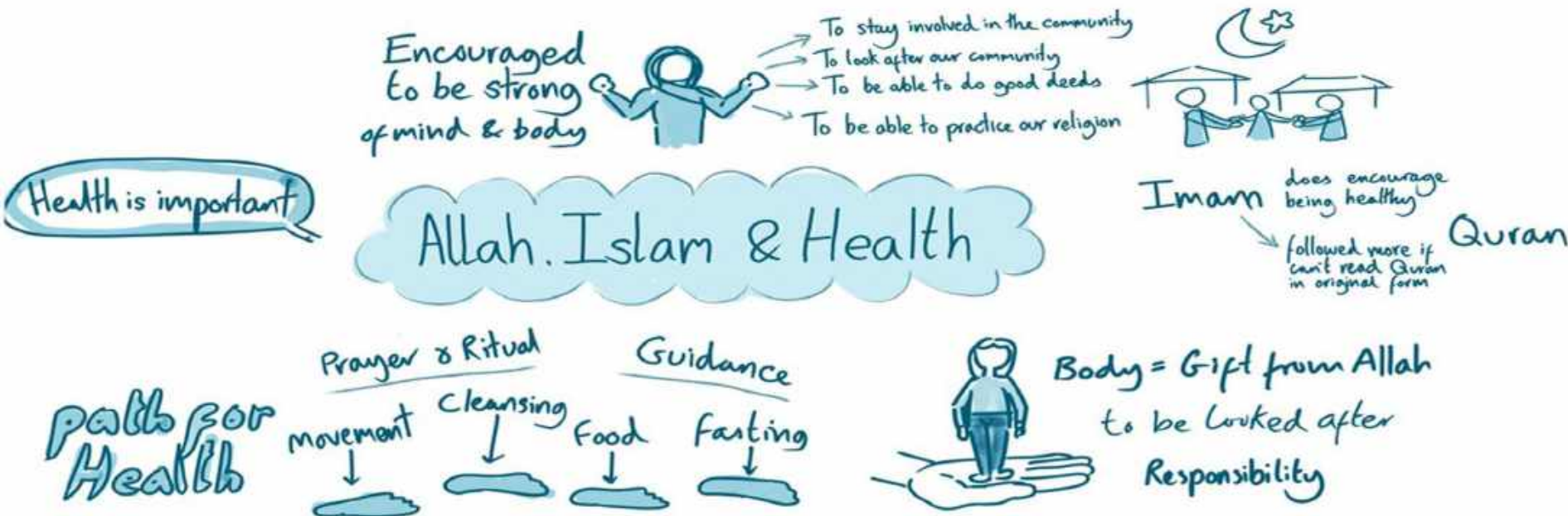
Early diagnosis of cancer through screening can reduce deaths and treatment burden if the people invited participate. Yet inequalities in screening participation remain: ethnic minority groups in particular experience barriers to cancer screening that need to be addressed in order to contribute to improving equality in health outcomes. Community-centred, participatory approaches can ensure that cancer screening interventions are culturally appropriate to the communities they are intended to serve. Virtual participatory research faces unique challenges in building the rapport required for successful collaboration between participants and researchers. This article describes the successful adaption of face-to-face participatory methods to co-designing, online, an intervention using faith-based messages to reduce cancer screening barriers. Based on the World Café method, we conducted four two-hour workshops by video call with a group of 10 Muslim women (29–65 years) from Glasgow, UK. Activities included (i) plenary and small-group discussions, (ii) graphic recording, and (iii) expert presentations. The workshops covered four topics: Islam and health, screening barriers, faith-based messages for screening barriers, and delivering a faith-based intervention. Anonymous feedback questionnaires evaluating each workshop showed the women found the workshops interesting, informative, and helpful. They reported being glad they had participated. Our findings highlight the importance of interactive discussion and low participant burden to optimise online co-design. The workshops created a faith-based cancer screening intervention engaging and accessible to Muslim women.

Keywords

community based research, methods in qualitative inquiry, participatory action research, virtual environments, arts based methods

IRK

How does Islam advise about health screening?



illness is a TEST also a test a challenge to become stronger

Screening as way of dealing with this test

use religion for strength

more progressive Imams

older community unaware that treatment is allowed.



needing more trust

Islam & Cancer Screening



Female doctors Available

References

- Zondervan KT, Becker CM, Missmer SA. Endometriosis. *N Engl J Med* 2020;382:1244-56. doi:10.1056/NEJMra1810764 pmid:32212520CrossRefPubMedGoogle Scholar
- Prescott J, Farland LV, Tobias DK, et al. A prospective cohort study of endometriosis and subsequent risk of infertility. *Hum Reprod* 2016;31:1475-82. doi:10.1093/humrep/dew085 pmid:27141041CrossRefPubMedGoogle Scholar
- Soliman AM, Yang H, Du EX, Kelley C, Winkel C. The direct and indirect costs associated with endometriosis: a systematic literature review. *Hum Reprod* 2016;31:712-22. doi:10.1093/humrep/dev335 pmid:26851604CrossRefPubMedGoogle Scholar
- O'Donoghue, E., Kapp, S., Murphy, T. & Kusljic, S. (2021). Nursing care for patients with endometriosis and/or adenomyosis: A mixed methods systematic review protocol. *COLLEGIAN*, 28(4), pp. 464-468. doi:10.1016/j.colegn.2020.10.005
- Gulanick, M., & Myers, J. L. (2022). *Nursing care plans: Diagnoses, interventions, & outcomes*. St. Louis, MO: Elsevier
- Passarello, K., Kurian, S., & Villanueva, V. (2019, April). Endometrial cancer: an overview of pathophysiology, management, and care. In *Seminars in oncology nursing* (Vol. 35, No. 2, pp. 157-165). WB Saunders.
- World Health Organization. Cervical Cancer. 2022.
- Ahmed, S. (2020). Ovarian Cyst and Polycystic Ovary. *International Egyptian Journal of Nursing Sciences and Research*, 13-15.
- Hepner A, Negrini D, Hase EA, et al. Cancer during pregnancy: The oncologist overview. *World J Oncol*. 2019;10(1):28-34. doi:<https://doi.org/10.14740/wjon1177>
- Vandenbroucke T, Verheecke M, Fumagalli M, Lok C, Amant F. Effects of cancer treatment during pregnancy on fetal and child development. *Lancet Child Adolesc Health*. 2017;1(4):302-310. doi:[https://doi.org/10.1016/S2352-4642\(17\)30091-3](https://doi.org/10.1016/S2352-4642(17)30091-3)

Semoga Bermanfaat

