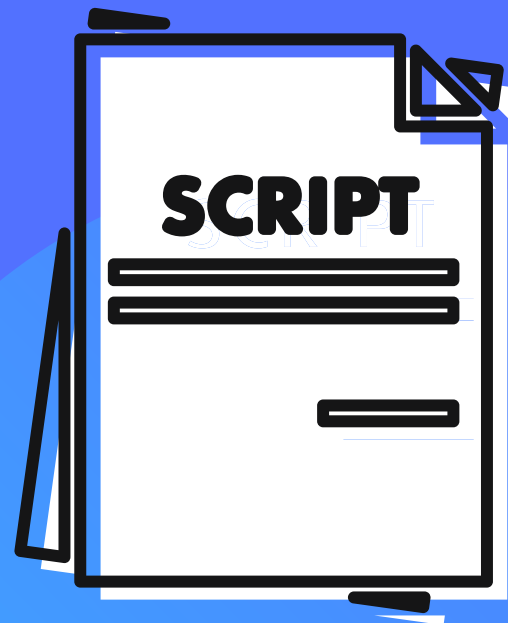


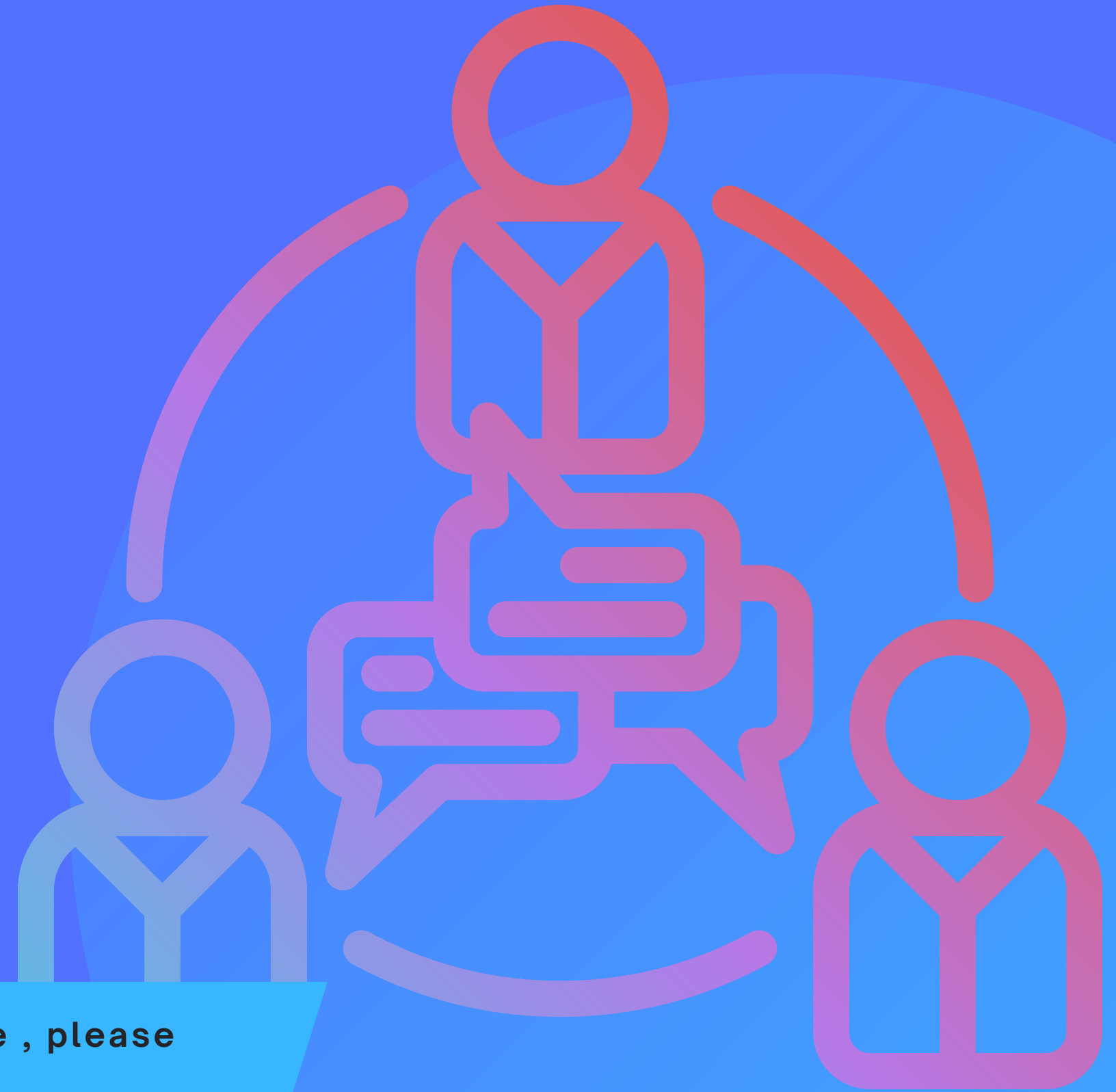
Yarmouk University

# Community Medicine

Lec. 13 - Prevention & Screening  
Written By : Group D2

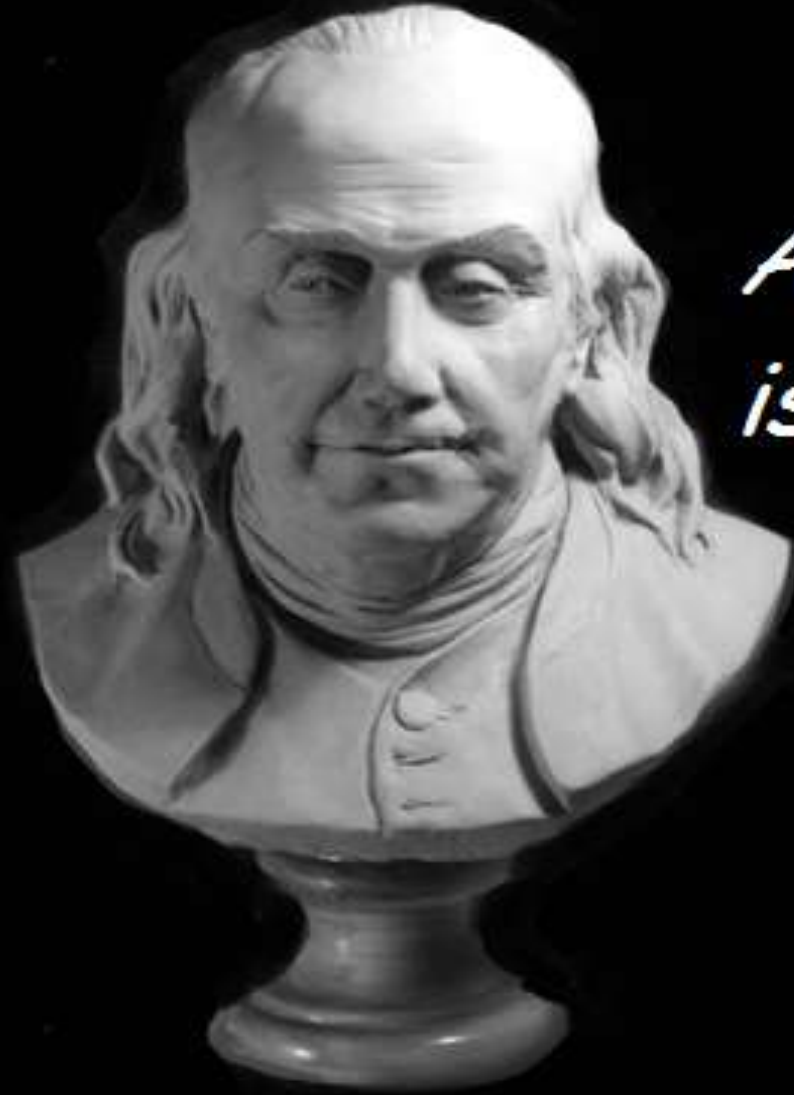


If you come by any mistake , please  
kindly report it to  
[shaghafbatch@gmail.com](mailto:shaghafbatch@gmail.com)



# Prevention and Screening

Dr.Ghalia Abu Mohsen



*An ounce of prevention  
is worth a pound of cure*  
- Ben Franklin

# Definition of Prevention

*“Actions aimed at eradicating, eliminating, or minimizing the impact of disease and disability. The concept of prevention is best defined in the context of levels, traditionally called primary, secondary, and tertiary prevention”*

# LEVELS OF PREVENTION

1) **Primary prevention:** keeps disease from occurring at all by removing its causes.

Examples:

- The most common is immunizations to prevent communicable diseases.
- Folic acid supplements prenatally to decrease the risk of spina bifida.
- **(the lady should start taking supplement 3 months before conception.)**
- Smoking cessation decreases lung cancer and other pulmonary diseases and cardiovascular diseases.
- Behavioral counseling. **Eg. Reduce fat intake to improve your lipid profile**
- Prophylactic surgery: bariatric surgery to prevent complications of obesity, Ovariectomy and mastectomy to prevent ovarian and breast cancer in women with certain genetic mutations.
- Drugs. **Eg. Aspirin as prevention from MI**

# Aspirin for primary prevention

- The decision regarding aspirin for primary prevention among healthy individuals should be individualized based on patient preference after discussion of the potential benefits and risks.
- زمان كان أي حد اكبر من خمسين سنة ياخذ اسبرين حتى يصير عنده حماية للقلب, لكن تم الغاء هاد الشئ لأنه لقوا انه .  
ما في استفادة وبالعكس في منهم صار عندهم نزيف فصار فيما بعد البروتوكول انه ينعطى فقط للناس المعرضين فقط.
- **The decision to initiate low-dose aspirin(75-100mg) for individuals aged 40 to 59 years of age without known heart disease who have a 10 percent or greater 10-year risk of CVD risk should be individualized and the potential benefit is small.**
- The balance between benefits and harms may weigh more heavily for harms over benefits in those over 70 years of age.
- Possible benefits: decreases the risk of nonfatal myocardial infarction (MI), possibly reduces the risk of colorectal cancer over long-term follow-up (with >10 years of treatment).
- Potential Risks: Bleeding, Aspirin sensitivity



## 2) Secondary prevention

- ❑ Detect the disease in the **latent** stage.
- ❑ Detects early disease when it is asymptomatic and when treatment can stop it from progressing.
- ❑ Example: Screening
- ❑ Screening is the identification of an asymptomatic disease, unhealthy condition, or risk factor.

# 3) Tertiary prevention

- **The idea here is that the patient already has the disease, .**
- Describes clinical activities that prevent deterioration or reduce complications after a disease has declared itself.
- An example is the use of beta-blocking drugs to decrease the risk of death in patients who have recovered from myocardial infarction.
- Diabetic patients need regular ophthalmologic examinations for detecting early diabetic retinopathy **(to prevent the patient from irreversible stage of a disease)**, routine foot care, and monitoring for urinary protein to guide use of angiotensin-converting enzyme inhibitors to prevent renal failure.
- Tertiary prevention is really just another term for treatment



## Levels of Prevention: Summary



# Periodic preventive health visits (periodic health examination PHE)

- Check up to reduce the probability for the patients to have certain disease (we talk about someone who has no symptoms).
- Definition: Evaluation of apparently healthy individuals in certain time periods, using a number of standard procedures such as counseling( just education for the patient about certain life style to reduce his probability to have disease), physical examination(check blood pressure), immunization(influenza vaccine), and laboratory investigations.
- How often should PHE be done? every three years for adult patients  $\leq 49$  years without chronic conditions, and annually for adults  $\geq 50$  years.
- PHE should be done every 6 weeks in patient with dyslipidemia.
- PHE should be done every 3 months in patient with diabetes.

# Periodic Health Examination-Components

- Risk identification
- Screening
- Immunization
- Education ( counseling )

# Preventive Care

Preventive services and screenings save lives and money



Regular checkups



Vaccinations and immunizations



Cancer screenings



Pregnancy and newborn care



Routine care for children



Patient counseling



Medical tests



# Risk identification

- History and Physical examination
- To determine which patient is risky .
- Eg. Someone who has risk for colorectal CA, so we take a proper history.
- Eg. Some diseases that its diagnosis depend on physical examination like hypertention and prostatic CA.

# Screening

- Definition: According to WHO:

Screening is defined as the presumptive identification of unrecognized disease in an apparently healthy, asymptomatic population by means of tests, examinations or other procedures that can be applied rapidly and easily to the target population.



# Types of screening

- 1. MASS (population –based) SCREENING** : large-scale screening of whole population groups. No selection of population groups is made. E.g.: cervical cancer screening. **Whatever was the risky population.**
- 2. SELECTIVE SCREENING** : screening of selected high-risk groups in the population. It may still be large-scale, and can be considered as one form of population screening. E.g.: genetic screening of people with strong family history of breast CA.
- 3. MULTIPLE (OR MULTIPHASIC) SCREENING** : the application of two or more screening tests in combination to large groups of people. E.g. Screening for Down syndrome by nuchal translucency in 1<sup>st</sup> trimester and AFP level in 2<sup>nd</sup> trimester.  
**(a primary test which its result determine if we have to do other tests)**
- 4. SURVEILLANCE** : ongoing systematic collection, analysis, and interpretation of health data that are essential to the planning, implementation, and evaluation of public health practice. e.g.: surveillance to identify active TB to ensure adequate treatment.
- 5. CASE-FINDING**: a strategy for targeting resources at individuals or groups who are suspected to be at risk for a particular disease. It involves actively searching systematically for at risk people, rather than waiting for them to present with symptoms or signs of active disease. e.g. Identify people with COPD to administer Flu vaccine. **(patient who don't do proper screening while they are risky), فهدول لازم احنا ندور عليهم ما نستناهم لحتى همه يجو**
- 6. POPULATION OR EPIDEMIOLOGICAL SURVEYS**: simultaneous assessment of the health outcome and exposures as well as potential confounders and effect modifiers. A survey is considered a cross-sectional study

**TABLE 2. Wilson and Jungner Criteria for Disease Screening  
(Adopted by the World Health Organization)**

---

1. The condition sought should be an important health problem
2. There should be an accepted treatment for patients with recognized disease
3. Facilities for diagnosis and treatment should be available
4. There should be a latent or early symptomatic stage
5. There should be a suitable test or examination
6. The test should be acceptable to the population
7. The natural history of the condition, including development from latent to declared disease, should be adequately understood
8. There should be an agreed policy on who to treat as patients
9. The cost of case finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole
10. Case finding should be a continuing process and not a "once and for all" project



# *Wilson and Jungner criteria*

- Disease:

1. The condition should be an important health problem, **has negative outcomes that can be avoided. Eg. Congenital hypothyroidism , screening for osteoporosis.**
7. The natural history of the disease should be adequately understood.
4. There should be a **latent** stage of the disease. **Not acute health problem ( we don't do screening for respiratory infection because the disease has no latent stage)**

- Screening Test:

5. There should be a test or examination for the condition.( safe, valid, simple, cheap and reliable)
6. The test should be acceptable to the population.

- Diagnostic Test and treatment

8. There should be an agreed policy on whom to treat.
2. There should be a treatment for the condition.
3. Facilities for diagnosis and treatment should be available.

يعني باختصار لما بدي اقرر اتجنب سرطان القولون لازم يكون عندي مقدرة اني اعمل تنظيف للقولون  
++لازم اكون قادرة اعالجه في حال طلع موجود

# *Wilson and Jungner criteria*

- Overall Screening Program

9. The total cost of finding a case should be economically balanced in relation to medical expenditure as a whole.

Example: the cost of screening for osteoporosis in relation to treating for pathological fractures, the screening should be cheaper

10. Case-finding should be a continuous process, not just a "once and for all" project.

بنقدر نعملها على طول السنه ما في مانع

Criteria	Comment regarding CKD screening
1 The condition is an important health problem.	CKD affects one in 10 adults worldwide. CKD increases the risk of all-cause and CV mortality and ESRD.
2 There should be an accepted treatment for patients with recognized disease	Treatment would need to be adapted to the presence of risk factors and co-morbidities (e.g. hypertension, diabetes, CVD, etc.)
3 Facilities for diagnosis and treatment should be available.	Diagnosis and treatment are routinely available in hospitals and health care centers.
4 There should be a recognizable latent or early symptomatic stage.	CKD in its early stages (1–3) is almost always asymptomatic.

# Screening tests

The following criteria for a good screening test apply to all types of screening tests:

- High sensitivity and specificity **have reliable results and almost no false negative or positive**
- High positive predictive value (PPV is the probability of patients who have a positive test result to actually have the disease) **when ppv is high, that's mean the patient almost have the disease, وهذا يعني انه النتائج موثوقه**
- Simplicity and low cost
- Safety
- Acceptable to patients and clinicians

# Commonly Screened Disorders in adults (cardiovascular disease prevention)

## Hypertension:

- Screen at every encounter starting at **age of 18**, every year for adults > 40 years and for those at high risk for HTN, and every 3-5 years for adults aged 18-39.  
high risk group, every year  
Low risk group, every 5 years

## Diabetes Mellitus (Type 2)

- Every 3 years beginning at **age 45**. Screen More Often and beginning at a younger age (35 years) for those who are overweight & if risk factors are present.
- **Screening tests:**
- **1-FASTING BLOOD SUGAR 2-HBA1C 3-OGTT, less practical, not simple**
- **Risk factors: Obese, strong family history, females with polycystic ovarian syndrome, Females with children more than 4 kg birth Wight**

## Hypercholesterolemia (USPSTF): **is under estimated by the most of the population**

- Screen at age **17 to 21 years** with a non-fasting non-high-density lipoprotein (non-HDL) cholesterol; if the screen was normal before age 21 but patient is at high risk (e.g. smoker or hypertensive), screen for lipid abnormalities at age 25 for men and 35 for women.
- If screen was normal before age 21 and patient is not at high risk, screen for lipid abnormalities at age 35 for men and 45 for women.
- Repeat measurements every five years, if lipid measurements are below the threshold for Rx.
- Stop screening at age 65 in patients who have had multiple lipid acceptable measurements.

# Cont

- **Other cardiovascular risk assessment** — Patients **aged  $\geq 20$  years** should undergo cardiovascular risk assessment every three to five years for the other modifiable risk factors: Diet, smoking, obesity and inadequate physical activity.
- **Obesity** — Screen all patients for obesity with a body mass index (BMI) and counsel all patients to maintain a healthy body weight .
- **Smoking:** Smoking status should be documented and for all patients who use tobacco, clinicians should offer the advice to quit, assess the patient's interest in quitting, and, for those interested in quitting, offer the necessary tools and follow-up.
- **Vascular diseases; Abdominal aortic aneurysm** : one-time ultrasound screening for AAA in men aged **65 to 75 years** who are current or former smokers.
- **SEXUALLY TRANSMITTED AND BLOODBORNE INFECTIONS** e.g. Gonorrhoea and Chlamydia
  - blood borne infections like, Hepatitis B, C
  - Gonorrhoea and chlamydia have recommendations in whole world for regular screening especially when there is risky sexual behaviour
  - In Jordan less applicable, people not seeking medical attention in this field.

# PSYCHOSOCIAL HEALTH CONCERNS: Depression, Anxiety, Substance-related problems, etc.

الشرط الاساسي لعمل screening for depression هو توفر العلاجات في حال كان التشخيص ايجابيا بوجود المرض.

screening for psychological health disorders anxiety generalised depression والفعال لأغلب حالات ال SSRI,concerns is valid

## Depression:

- General population screening for depression, when the practice setting has adequate systems to ensure accurate diagnosis, effective treatment, and appropriate follow-up.
- Screen **all adults** for depression at the time of a routine visit.
- **Method of screening:** The Patient Health Questionnaire-2 (PHQ-2), also called the “Two-Question Screen:
  - During the last month, have you often been bothered by feeling down, depressed, or hopeless?
  - During the last month, have you often been bothered by having little interest or pleasure in doing things?
  - PHQ-2 is a two questions and it's the major criteria to diagnose depression. If negative, we don't have depression If positive, we go to PHQ-9
  - phq-9 other symptoms of depression, like Appetite , concentration, sleep patterns, Guilty sensations

# Osteoporosis

- **National Osteoporosis Foundation (NOF) recommends bone mineral density (BMD) testing for:**

• السر انك تكتشف ال osteoporosis قبل ما يصير fractures

- all women  $\geq 65$  years old **even with no risks**
- all men  $\geq 70$  years old **even with no risks**
- Perimenopausal women, postmenopausal women  $< 65$  years old, and men aged 50-69 years with high risk for fracture
- **Risk factors like family history, past medical history, Chronic liver diseases, CKD, Rheumatoid arthritis, celiac disease**
- any adult with low trauma fracture after age 50 years **Check for bone density at 50**
- any adult with condition (such as rheumatoid arthritis) or use of medication (such as glucocorticoids for  $\geq 3$  months) associated with bone loss or low bone mass.
- **Example: Patients with long term use of prednisone for example should be screened before 50**

# Osteoporosis

It has a negligible amount of radiation , so no risk of cancer in future

- Method of screening: **Dual-energy x-ray absorptiometry (DXA)**

It shows bone mineral density

- Frequency of screening: a follow-up DXA in 10 to 15 years if DXA showed normal or slightly low bone mass (T-score -1.01 to -1.49), with no risk factors for accelerated bone loss and with low absolute fracture risk.

Doses are according to age ; these minerals can be taken either from supplements or dietary sources

- The National osteoporosis foundation (NOF) recommends at least 1200mg calcium and 800 IU/day of vit D for all adults above 50 years of age.
- Recommends also participation in weight bearing and muscle-building exercise, lifestyle modification and fall prevention.



## **FROM PREVIOUS SLIDE**

DXA scan shows bone mineral density in comparison with average bone density for young age group “T score”

T- score = -1 to -1.5 SD ( normal)

If DXA result from -1 to -2.5 = osteopenia

If DXA result less than -2.5 =osteoporosis

We care about muscle-building exercise to improve balance =low chance of falling=no fractures

# Cancer screening

Prostate and lung cancer screening is not recommended universally, they can

Global cancer incidence: both sexes offer them but not recommended to all patients

- Breast and lung cancers were the most common cancers worldwide, contributing 12.5% and 12.2% of the total number of new cases diagnosed in 2020.
- Colorectal cancer was the third most common cancer, contributing to 10.7% of new cases in 2020.

Rank	Cancer	New cases in 2020	% of all cancers
	All cancers*	18,094,716	
1	Breast	2,261,419	12.5
2	Lung	2,206,771	12.2
3	Colorectal**	1,931,590	10.7
4	Prostate	1,414,259	7.8
5	Stomach	1,089,103	6.0
6	Liver	905,677	5.0
7	Cervix uteri	604,127	3.3

Male;  
Lung cancer  
>prostate>colorectal

Female;  
Breast cancer  
>lung>colorectal> cervical

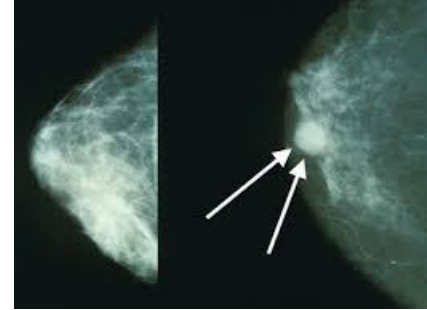
# Breast Cancer

- Breast cancer has now overtaken lung cancer as the world's most commonly-diagnosed cancer, according to statistics released by the International Agency for Research on Cancer (IARC) in December 2020.
- Breast cancer is the most commonly diagnosed cancer and also the leading cause of cancer death in women worldwide.

# Breast Cancer Screening According to USPSTF

## Average-risk women:

- Average-risk women : have less than a 15 % lifetime risk of developing breast cancer, the majority of women are at average risk.
- Method of screening : Mammography
- When to start screening?
- **Age under 40** — Screening not recommended.
- **Age 40 to 49:** The decision to perform mammography should be determined by individual patient risk and values through shared decision-making. Screening interval: every two years.
- **Age 50 to 74** — breast cancer screening with mammography is **recommended**. Screening interval: Every two years, unless the prior screening identified a finding for which more frequent breast imaging was advised.



# Breast Cancer Screening According to USPSTF

- For women with an estimated lifetime breast cancer risk of **more than 20% or who have a *BRCA* mutation**, screening should **begin at 25 years of age or** at the age that is **five to 10 years younger** than the earliest age that breast cancer was diagnosed in the family
- Magnetic resonance imaging (MRI) is recommended annually for breast cancer surveillance strategy in high-risk women
- **Clinical breast examination** plus mammography seems to be no more effective than mammography alone at reducing breast cancer mortality.
- Teaching **breast self-examination** does not improve mortality and is not recommended; however, women should be aware of any changes in their breasts and report them promptly

**According to previous two slides**

- average risk group screening: mammogram “every two years”
- In Jordan ,screening starts at 40 for average risk group
- American guideline recommend start screening at 50
- mammography ,shows tissue changes
- people with high risk especially BRCA gene mutation:
  - 1- screening at age 25 OR 5-10 years younger than first relative diagnosis age
  - 2- proliferative mastectomy:best preventive method for BRCA gene mutation patient
  - 3- screening method of choice is MRI “ annually”
- Worldwide , they don't recommend self breast exam, because it may result in a large unnecessary samples and biopsies not needed, otherwise they recommend awareness only

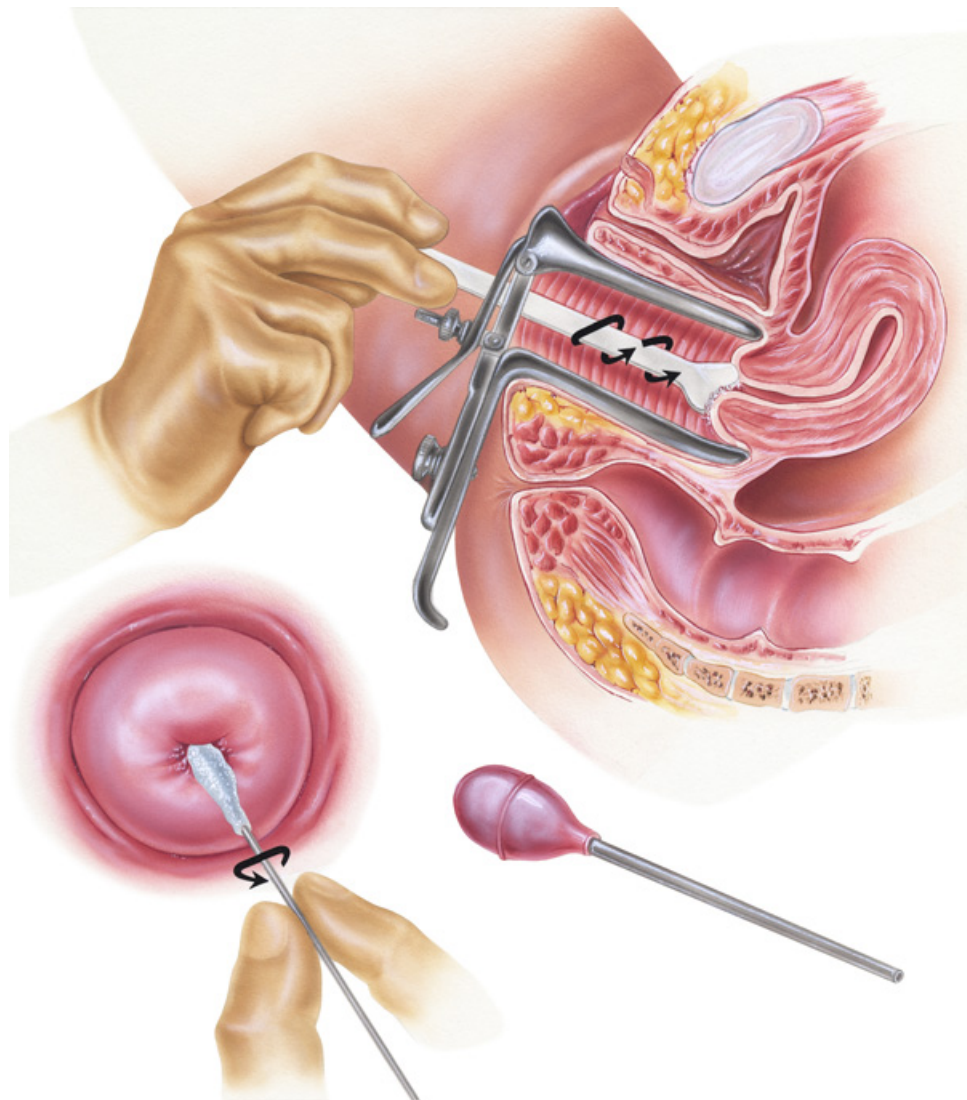
# Cervical cancer According to USPSTF

Cervical cancer is the fourth most common cancer in women worldwide.

Screening method: pap smear.

When to start: **At age 21**

- For average-risk women (without HIV or immunocompromise) 21-29 years:
    - Pap smear alone every 3 years.
  - For average-risk women (without HIV or immunocompromise) 30-65 years,
    - Co-testing (Pap smear and human papillomavirus [HPV] testing) every five years OR
    - Pap smear screening every three years.
- If both initial tests are negative.
- Women  $\geq 65$  years who have had adequate negative prior screening and are not at increased risk do not need to be screened.
  - Older women who have not been adequately screened should be screened until age 70 to 75 years.
  - Individuals who have had a total hysterectomy (hysterectomy with removal of the cervix) for reasons other than cervical cancer do not need to be screened





### **According to previous two slides**

- cervical cancer is not common in Jordan , because the MC risk factors are multiple sexual partners and human papillomavirus , and they are not common in our region in comparison to the west population
- Worldwide recommended age of screening is at 21
- if total hysterectomy was done for any cause other than cancer,then we can stop the screening.

In the picture, we use a **speculum**: to reach the cervix, and a **spatula** : on a rotational form for cervix to do cytology study

- If abnormal cells were found; we follow a specific protocol like repeating the pap smear every 6 months , or take another smear

# Colorectal cancer

- The third most common cancer for both sexes worldwide.
- When to start? do an initial risk assessment to determine if a patient is at increased risk for CRC at a first office visit and update the information at a minimum of every five years.

## Average risk:

- Start at age  $\geq 45$  years. (according to USPSTF)
- Continue to screen until 75 years .
- Screening decisions should be individualized for those aged 76 to 85 years.
  
- Method of screening: use a shared decision-making process to discuss specific CRC screening test protocols. Options are:
  - **Colonoscopy** every 10 years
  - **Fecal immunochemical testing (FIT)** for occult blood annually on a single sample.
  - Multitarget **stool DNA (MT-sDNA)** every three years.
  - **Computed tomography colonography (CTC)** every five years.

### **According to previous slide**

- USPSTF: united states preventive service task force
- USPSTF is the main resource for cancer screening methods and protocols

-methods for colorectal cancer screening:

1- colonoscopy :best one, but some people might see it  
invasive

2- fecal immunochemical testing: i look for  
immunological reaction to antibodies ;caused by the  
presence of occult blood in feces

3- guaiac-based fecal occult blood test: using a specific  
chemical that reacts with blood occult if found and give  
a special color as an indication of blood occult  
presence

4- flexible sigmoidoscopy: once every 5 years

5- CTC :once every 5 years

**\*\*IF we choose option other than colonoscopy and  
found anything abnormal, then colonoscopy became a  
mandatory**

# Colorectal cancer

- High risk adults: (individuals with family history of CRC, familial adenomatous polyposis, inflammatory bowel disease, etc)
- Start at age 40 years (or 10 years younger than age at which youngest affected relative was diagnosed with colorectal cancer) .

يعني لو حدا من الاقارب الدرجة الاولى ل شخص, اتشخصو على  
عمر ال 45 , هاد الشخص لازم يعمل screening على عمر ال 35

# Prostate Cancer Screening

- Worldwide, prostate cancer is the second most commonly diagnosed cancer in men.
- Clinicians do not specifically advise in favor of or against screening. Men who are candidates for screening should be engaged in shared decision-making about whether they choose to be screened.
- Method of screening: prostate-specific antigen (PSA) testing
- When to start:
  - In average-risk men, initiate discussion of screening at age 50 years.
  - For other men at higher risk for prostate cancer, including black men and men with a family history of prostate cancer, initiate discussion of screening at age 40 to 45 years.

People at average risk will do this test by age of 50, But if at high risk we will do the test by age of 40.

# Prostate Cancer Screening

Screening is By PSA level

- ❑ Screening interval : one to two years.
- ❑ When to stop: For most patients, offer screening up to age 70 years, stopping earlier if comorbidities limit life expectancy to less than 10 years.
- Men with a PSA level above 7 ng/mL should be referred, without further testing, to a urologist for evaluation.
- For men with a PSA level between 4 and 7 ng/mL, repeat the PSA testing several weeks later. Men with a repeat PSA level >4 ng/mL should be referred to a urologist for evaluation.  
*PSA in grey zone should*
- If a **DRE** is performed, men with a **nodule**, **induration**, or **asymmetry** on prostate examination should be referred to a urologist, regardless of the PSA result.  
*وكان عنده وحدة من هدول*

Note that PSA test is not specific for prostate cancer because it can rise in other conditions like:

- BPH

- Prostatitis

- Taking a previous prostate sample

what is important is not to know current PSA levels but to know how much it differs in the last year or in the last time it was tested

الأهم من عمل فحص ال lung cancer هو منع ال  
lung cancer من الأساس

# Lung Cancer

- Lung cancer is the second most common cancer worldwide and is the leading cause of cancer-related death.
  - Prevention (promoting smoking cessation) is likely to have far greater impact on lung cancer mortality than is screening.
  - Screening lung cancer with annual low-dose computed tomography (LDCT) has the potential to significantly reduce the burden of lung cancer.
- Who should do lung cancer screen CT scan??
- Screen adults aged 55 to 80 years who have at least 30 pack-year smoking history and currently smoke or have quit within the past 15 years.



# Jordanian National Program

- **Breast Cancer:**

- **Women between 25 and 39 years old at normal risk:**

- Monthly breast self-examination.
- Annual clinical breast exam.

In Jordan, breast cancer screen starts at 40y NOT 50

- **Women 40 years and older:**

- Monthly breast self-examination.
- Annual clinical breast exam.
- Mammogram annually.

# Jordanian National Program

- **Cervical Cancer:**

Use **PAP smear** starting three years after becoming sexually active, and annually thereafter.

- **Colon Cancer:**

Colonoscopy every ten years, fecal occult blood testing (FOBT) annually, or flexible sigmoidoscopy every five years starting at the age of 50.

# **I**MMUNIZATION



The main goal is to prevent the fatal communicable diseases like Measles, Mumps and Rubella.

شرحت المطاعيم

داخل الجدول



كل اشئ متى

بنعطيه وهكذا

The Jordanian National Immunization Program				
Age	Recommended Vaccines			
First Month	BCG			
61 Days	<b>DTaP-Hib-IPV</b>	HBV	RV5	
91 Days	<b>DTaP-Hib-IPV</b>	HBV	RV5	OPV
121 Days	<b>DTaP-Hib-IPV</b>	HBV	RV5	
9 Months	Measles			OPV
12 Months			MMR	
18 Months	DTP		MMR	OPV
6 Years (First Grade)	Td			OPV
15 Years (10th Grade)	Td			

# ADULT IMMUNIZATION

- According to The Centers for Disease Control and Prevention (CDC) :
- **Influenza vaccine** – Annual influenza vaccination for all adults. (Flu vaccine) (Main target to reduce the symptoms and complications of flu)
- **Tetanus, diphtheria, and acellular pertussis vaccination (Td/Tdap)** : a single dose of Tdap for all adults aged 19 years and older who have not received Tdap previously. Thereafter, all adults should receive a booster every 10 years with either Tdap or Td and should receive a Tdap with each pregnancy. We should give tetanus vaccine for people who have dirty wound specially for people who do not receive tetanus vaccine yet.
- **Varicella vaccine** : recommended for healthy persons >13 years of age without evidence of immunity. should receive two doses, separated by four to eight weeks  
We prefer to give it for anyone less than 13 years old who did not have chicken pox previously and the reason is that people who are above age of 13 OR less than 1, the chicken pox infection will be more severe among them.
- **Zoster vaccine** – All individuals 50 years of age or older, RZV **recombinant zoster vaccine** (2 doses separated by 2 months) لمنع الحزام الناري-----غالبا يبجي بعد عمر ال50 سنة-----لهيك لازم نعطيه لكل حد أكثر من 50 سنة (Shingels)

# ADULT IMMUNIZATION..cont

- **Human papillomavirus vaccines** : For all individuals between ages 11 and 26 years.
- **Pneumococcal vaccines** – all adults 19 to 64 years who have a condition that increases the risk of pneumococcal disease (e.g. Chronic lung disease, Chronic liver disease, etc). It is also recommended for all adults  $\geq 65$  years. Even without risk factors  
*كل الأشخاص الي أقل من 65 سنة وعندهم*
- **Hepatitis B vaccination**: HBV vaccination is recommended for all adults  $< 60$  years of age, and for those  $\geq 60$  who are at increased risk for acquiring HBV infection

Education

**COUNSELLING** → Age group **بيفرق حسب ال**

# Counseling

## I. Newborns

- Counseling to prevent sudden infant death syndrome (avoid prone sleeping position)
- Counseling to promote a healthy diet and breast-feeding →

How important is breast feeding?

1-Give antibodies for the baby

2-Protection against atopic diseases

3-Prevent future and childhood obesity

4-Improve child and mother relationship

5-Prevent postpartum depression for the mother

## II. Children

- Counseling to prevent household injuries :
  - \*Smoke detectors
  - \*Hot water heaters set, 49-55 °C
  - \*Childproof containers for medication
  - \*Approved bicycle helmets
- Counseling to prevent dental disease :
  - \*Fluoride supplementation if inadequate in water
  - \* Regular visits to dentist
  - \*Regular brushing and flossing



# Counseling

## **///. Adolescents**

- Counseling to prevent motor vehicle injuries
- Counseling to promote a healthy diet and physical activity
- Counseling to prevent drugs, tobacco use & alcohol use
- Counseling to prevent sexually transmitted diseases

## **IV. Adults**

- Smoking cessation, nicotine replacement therapy
- Dental hygiene
- Seat belt use
- Injury prevention
- Moderate physical activity
- Problem drinking screening/counseling
- STD counseling
- Nutritional counseling
- Osteoporosis and HRT ( In Perimenopausal Women)

# Case Study No.1

- A 47-year-old patient presents for a routine physical examination. The patient does not have a history of colorectal cancer, inflammatory bowel disease, or adenomatous polyps or a family history of colorectal cancer. The patient's **body mass index is 27 kg per m<sup>2</sup>**, and the **HA1C level at their last visit was 5.9%**. The patient has not been screened for colorectal cancer in prior visits.

Because normal is for 5.6

- **1.** According to the USPSTF recommendation statement, how should this patient be counseled regarding the need for colorectal screening?
  - A. Only adults at increased risk of colorectal cancer should begin screening at 45 years of age.
  - B. Regardless of risk factors, all patients should be screened for colorectal cancer starting at 45 years of age.
  - C. The patient is at increased risk of colorectal cancer because of an abnormal body mass index and A1C level and should be offered screening at today's visit.
  - D. The patient has no personal or family history of colorectal cancer, so routine screening should begin at 50 years of age.
  - E. The net benefit of screening for colorectal cancer is small, so the patient should be referred to screening only if a strong preference is expressed.

- **The correct answer is B.**
- The USPSTF recommends screening for colorectal cancer beginning at 45 years of age in adults at average risk

- 2. According to the USPSTF recommendation statement, which one of the following is an appropriate test and interval for colorectal cancer screening?
  - A. Stool DNA test with fecal immunochemical testing (sDNA-FIT) every five years.
  - B. High-sensitivity guaiac fecal occult blood test (gFOBT) or FIT every five years.
  - C. Flexible sigmoidoscopy every seven years.
  - D. Colonoscopy every 10 years.
  - E. Computed tomography colonography every 10 years.

**The correct answer is D.**

# Case study No.2

- DB is 72 years old and recently moved into a nursing home. She has not received her yearly influenza shot. DB has numerous health problems, including diabetes mellitus, arthritis (for which she receives prednisone) and emphysema. She has a history of having influenza almost every year for the past 15 years.
- **1.** Which of the following factors contribute to placing this patient at high risk for serious complications of influenza?
  - A. More than 65 years of age.
  - B. Living in an institution.
  - C. Having pulmonary lung disease.
  - D. Having a history of influenza viruses

The answers are A, B and C

- **2.** During which one of the following times would it have been optimal for DB to have received the influenza vaccine?
  - A. Once influenza virus activity has been documented in the community.
  - B. During the month of September.
  - C. Between October and mid-November.
  - D. Between December and mid-January.
  - E. Between September and January.

**The answer is C:** between October and mid-November. Because the influenza season usually begins in December, the period between October and mid-November is the optimal time for immunization campaigns.

Thank You