# Women's Health Supervised by: Dr. Lemmese AlWatban

Nouf Altwaijri, Nouf Alabdulkarim, Lojain Alsiwat, Nojood Alhaidri, Khawla Alammari, Razan Alsabti

# Screening Nouf Altwaijri

### **Screening for Cervical Cancer**

#### ACOG Recommendation

Population	Screening
< 21 years	No screening
21-29 years	Cervical cytology every 3 years
30-65 years	Cervical cytology every 3 years OR hrHPV testing alone every 5 years OR Co-testing (both) every 5 years
>65 years + adequate prior screening	No screening
Prior hysterectomy + removal of cervix + no history of high grade cervical precancerous lesion or cervical cancer	No screening

# Screening for Breast Cancer

These recommendations represent guidance from the American Cancer Society (ACS) for women at average risk of breast cancer Women All women should become familiar without any with the potential benefits, significant limitations, and harms associated History with breast cancer screening. Women with **Regular** screening mammography starting at age 45 years. an average risk of breast 1a. 45 to 54 years = screened annually 1b. >55 years = biennial screening or cancer annually 1c. 40 to 44 years = Can begin annual screening Clinical breast examination is not

Clinical breast examination is not recommended for breast cancer screening among average-risk women at any age.

### **Screening for Colorectal Cancer** USPSTF Recommendations

Population	Screening
50-75 years	Screening for colorectal cancer using fecal occult blood testing, sigmoidoscopy, or colonoscopy
76-85 years	No screening unless there were specific considerations that support colorectal cancer screening in an individual patient.
>85 years	No screening
Computed Tomographic Colonography and Fecal DNA testing as screening modalities	The USPSTF concludes that the evidence is insufficient to assess the benefits and harms of computed tomographic colonography and fecal DNA testing as screening modalities for colorectal cancer.

# Screening for Osteoporosis

#### **USPSTF Recommendations**

Women 65 years and older	screening for osteoporosis with bone measurement testing to prevent osteoporotic fractures
Postmenopausal women younger than 65 years at increased risk of osteoporosis	screening for osteoporosis with bone measurement testing to prevent osteoporotic fractures

Violence Lojain Alsiwat

### **Risk factors:**

- 1. Age.
- 2. Gender.
- 3. Education.
- ≻ <u>Medical</u>
- 1. Substance abuse/alcoholism.
- 2. Mental or physical disability.
- ➢ <u>Past history of abusive</u>
- 1. Parental violence.
- 2. Rigid family rules.
- 3. Social isolation.

- ➤ <u>External stressor</u>:
- 1. Financial struggle.
- 2. Losses.
- 3. Work stress.
- 4. Life changes.



## Signs and symptoms

- 1. Brusics (in non-weight bearing child, over fleshy body parts).
- 2. Rib fracture
- 3. Brain injury
- 4. Pattern Skin injures (Example: cigarette burn).
- 5. Oral injuries (Example: lacerations).
- 6. Face or trunk injury.
- 7. Chronic pain.
- 8. Injury with no explanations.
- 9. Frequent mental health complain (Anxious, depressed, low self esteem).

## **Tobacco Usage management:**





dvise to quit tobacco at every visit.



quitting within 2 weeks with pharmacotherapy or counseling.



#### > Pharmacological treatments

- 1. Nicotine replacement therapy (NRT)
- Patches, short acting oral forms (lozenges, chewing gum) ,nasal sprays, nicotine inhalator.
- 2. Non Nicotine replacement therapy (non-NRT)
- Bupropion (anti-depressant).
- Varenicline (blocks effects of nicotine from cigarettes).

#### Behavioral treatments

- 1. CBT.
- 2. Motivational interviewing.
- 3. Telephone support.
- 4. Social media support.

# Screening Nouf Alabdulkarim



Canadian Task Force on Preventive Health Care

Risk determined with a validated risk calculator: FINDRISC and CANRISK which factor in:

- 1. Age
- 2. Obesity
- 3. History of elevated glucose levels
- 4. History of hypertension
- 5. Family history of diabetes
- 6. Limited activity levels
- 7. Diet with limited intake of fruits and vegetables

Population	Screening
Low to moderate risk	Not recommended
High risk	Every 3-5 years with A1C
Very high risk	Every year with A1C



United States Task Force on Preventive Health Care

#### Non-modifiable:

-Age

-Gender

-family history

#### Modifiable :

- Raised or altered levels of blood cholesterol
- Raised triglycerides with low HDL-cholesterol
- High blood pressure
- Diabetes
- Smoking
- Overweight and obesity
- Being inactive
- Excessive alcohol
- Excessive stress

Population	Screening
Women who are not at increased risk for coronary heart disease.	Not recommended
Women 20-45 at Increased Risk for CHD	recommended
Women 45 and Older at Increased Risk for CHD	recommended



United States Task Force on Preventive Health Care

Population	Screening
<ul> <li>Adult aged 40 years or older</li> <li>Women with increased risk for high blood pressure</li> </ul>	annual screening
<ul> <li>Adults aged 18-39 with normal blood pressure ( &gt;130/85 mm Hg ) who do not have other risk factor</li> </ul>	Every 3 to 5 years
Pregnant women	each prenatal care visit throughout pregnancy.



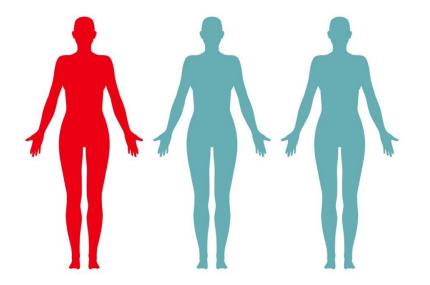
Population	Screening
General adult population, including pregnant and postpartum women	Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.

# **CVD** Razan Alsabti





Cardiovascular disease is the leading cause of death among women in the United States, accounting for ≈1 of every 3 female deaths.



# How do women with CVD present?

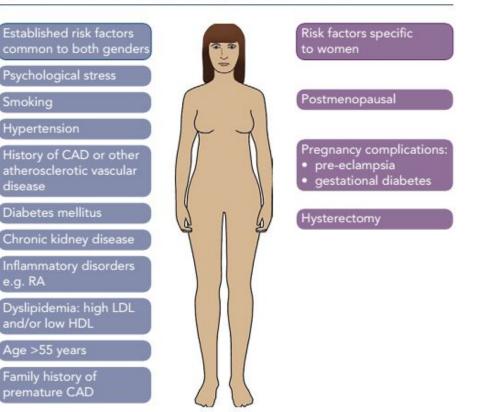


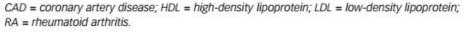
Unique risk factors CVD for women:

Non-modifiable	Modifiable	Female-specific or
risk factors	risk factors	predominant risk factors
<ul> <li>Age</li> <li>Sex</li> <li>Family history of premature cardiovascular disease</li> </ul>	<ul> <li>Hypertension</li> <li>Diabetes mellitus</li> <li>Obesity</li> <li>Cigarette smoking</li> <li>Physical inactivity</li> <li>Dyslipidemia</li> </ul>	<ul> <li>Pregnancy induced hypertension, preeclampsia, eclampsia</li> <li>Gestational diabetes</li> <li>Polycystic ovarian syndrome</li> </ul>

- Menopause
- Systemic inflammatory rheumatologic diseases
- Mental stress/depression

Figure 1: Risk Factors for CVD that are Common to Both Men and Women and those Specific to Women









- → Women with ACS are generally older with more clustering of risk factors that may contribute to their higher risk of mortality.
- → At presentation in STEMI, both men and women have comparable symptoms of chest pain, but women tend to have more concomitant vaso-vegetative symptoms that can mask the chest pain.
- → The clinical presentation of coronary artery disease and the interpretation of noninvasive diagnostic testing is less reliable in women compared with men.
- → At younger ages women more often have ACS with angiographically 'normal' coronary arteries than men.



#### 1. Electrocardiography

Electrocardiography abnormalities are associated with an increased risk of coronary heart disease (CHD)

#### Screening for CVD Risk with ECG: Clinical Summary of the USPSTF Recommendations:

Population	Adults at low risk of CVD events	Adults at intermediate or high risk of CVD events
Recommendations	Do not screen with resting or exercise ECG.Grade: D	No recommendation. Grade: I (insufficient evidence)
Screening tests	<ul> <li>Resting ECG records cardiac electrical activity while the patient is at rest, over a short period.</li> <li>Exercise ECG records cardiac electrical activity during physical exertion (treadmill test).</li> <li>Both resting and exercise ECG look for markers of previous myocardial infarction, myocardial ischemia, and other cardiac abnormalities.</li> </ul>	



#### What the USPSTF Grades Mean and Suggestions for Practice

Grade	Definition	Suggestions for Practice
А	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
В	The USPSTF recommends the service. There is high certainty that the net benefit is moderate, or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
с	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
l statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the Clinical Considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.



#### 2. Blood Tests

- Fasting lipid profiles including (LDL, HDL, total cholesterol and triglycerides) are widely used in screening.
- Hemoglobin A1c.

Laboratory test name	Previous result	Additional risk factors	Repeat test indicated
Total serum cholesterol	Normal (<200 mg/dL) = ( < 5.17 mmol/L) Absent		Begin screening at age 20, repeat every 4 to 6 years
		Present	Within 3 years
	Borderline high cholesterol (200-239 mg/dI	_) = (5.17- 6.18 mmol/L)	Within 3 years
	High cholesterol ( $\geq 240 \text{ mg/dL}$ ) = ( > 6.2 mmol/L)		Within 3 years
Glycated hemoglobin A1C	Normal (<5.7%)	Absent	Begin screening at age 45, repeat every 3 years
		Present	Begin screening at age 18, repeat every 3 years
	Prediabetic (5.7-6.4%)		Within 12 months
	Diabetic (≥6.5%)		Within 4 months



#### 3. Blood Pressure Measurement

Hypertension is a common, preventable risk factor for the development of CVD and death.

#### 4. Imaging

A variety of imaging tools have been studied and are increasingly used in practice to screen for CVD, including coronary artery calcium (CAC) obtained by computed tomography (CT), carotid artery ultrasound, and abdominal aorta ultrasound. CAC and carotid artery imaging are both used as markers of atherosclerosis.

#### 5. Genetic Screening

Family history plays an important role in assessing risk of CVD. Genetic screening is not yet sophisticated enough to detect this complex interplay between genes. However, some less common inherited heart diseases are caused by one or a few genetic changes that work to cause disease. Examples of these include familial hyperlipidemia, some forms of hypertrophic and dilated cardiomyopathy.

# **Menopause** Khawla Alammari & Nojood Alhaidri

### Perimenopause & menopause

- Most women begin transition (perimenopause) at about age 47.
- Perimenopause usually lasts 4-5 years, but may last only 2 years.
- Menopause, an expected event in a woman's life, is commonly defined as 12 months of amenorrhea.
- Average age at menopause is 51 (over 90% by age 55)
- Perimenopausal changes:
  - a. Change in amount or duration of menstrual flow
  - b. Change in length of menstrual cycle
  - c. Skipping menstrual periods
  - d. Risk of unintended pregnancy during perimenopause

# **Menopausal signs & symptoms**

- Vasomotor symptoms: hot flashes, day sweats, night sweats
- Sleep disturbances: Insomnia
- **Genitourinary changes:** urogenital atrophy & dryness, urinary incontinence and Urinary tract infections (UTIs)
- Sexual dysfunction: Changes in libido, dyspareunia
- **Psychological:** Mood swings, irritability, anxiety, depression
- Headaches and backaches
- Fatigue
- Palpitations
- Forgetfulness
- Stiffness/soreness

### **Strategies for Managing Symptoms**

Hot flashes/ sweats (day,night)



Non- pharmacologic	pharmacologic	
Clothing type	ERT/HRT	
Identify and avoid triggers	Clonidine	
Exercise (aerobically)	Bellergal	
	Low dose oral contraceptives (20 mcg estrogen)	
Herbal preparations/dietary supplements.		

### **Strategies for Managing Symptoms**

(Vaginal Dryness/ Dyspareunia)



Non- pharmacologic	Pharmacologic
Vaginal lubricants/moisturizers	ERT/HRT
Regular sexual stimulation	Vaginal estrogen creams
	Vaginal estrogen ring
	Low dose oral contraceptives
Herbal preparations/dietary supplements.	

### **Strategies for Preventing Diseases of Advancing Age**

- Strategies for preventing the diseases associated with advancing age can be multi-faceted, and include dietary, exercise, and possibly lifestyle changes as well as pharmacologic interventions.
- Counseling should consider the broad range of pharmacologic and non-pharmacologic interventions that can address the health considerations under discussion at the time of menopause.
- Counseling should also include the strength of the supporting scientific evidence for each of the interventions.
- Most pharmacologic approaches to managing menopause carry risks as well as benefits.
- ✤ A clinician must have a thorough understanding of a patient's own and her family's histories of cancers, heart and cardiovascular disease, osteoporosis, and other conditions that may influence her inherent risk of developing disease or the degree to which a pharmacologic intervention might increase or decrease.

### Menopausal health risks

- 1) Coronary heart disease (CHD).
- 2) Stroke.
- 3) Osteoporosis.
- 4) Alzheimer's Disease.
- 5) Cancers.
- 6) Age-Related Macular Degeneration.

### **Coronary Heart Disease (CHD)**

- Coronary heart disease is the leading cause of death and a significant cause of morbidity in American women. The risk of CHD increases in older women.
- Although many women fear breast cancer more than heart disease, one in two women will eventually die of heart disease or stroke, while only one in 25 will die from breast cancer.

\*American Heart Association. Heart and Stroke Statistical Update. Dallas, TX: AHA, 1997.

### **Coronary Heart Disease (CHD)**

#### **Risk Factors for CHD:**

- Positive family history of premature CHD (definite MI or sudden death before age 55 in a first-degree male relative, or before age 65 in a first-degree female relative)
- ✤ Hypertension
- Diabetes mellitus
- ♦ Current cigarette smoking
- Age and gender (women ( 55, or premature menopause and not on HRT)
- ✤ HDL<35 mg/dL</p>
- LDL>160 mg/dL, if patient does not have CHD and has no more than one other CHD risk factor
- LDL>130 mg/dL if patient does not have CHD but has two or more other CHD risk factors or has other non-cardiac vascular disease.
- Peripheral atherosclerosis or carotid artery disease (places patient in highest risk category)

#### **Coronary Heart Disease (CHD)**

Smoking cessation	Normal total serum cholesterol, LDL, HDL, triglycerides
Exercise	ERT/HRT
Healthy diet: low in fat, cholesterol, and salt, and high in dietary fiber.	Statins
BMI within normal	Consume adequate amounts of vitamins C and E (antioxidants that may help reduce the deposition of LDL in the arteries)
Manage stress	Folic acid
Control of blood pressure, DM if present	Soy

#### **Coronary Heart Disease (CHD)** "Prescription medications"

ERT/HRT	<ul> <li>Epidemiological studies consistently find that women using ERT/HRT have a 40-50% lower risk of dying of coronary heart disease than women who do not take ERT/HRT.</li> <li>A number of observational studies have reported reduced mortality in women with existing CHD taking ERT/HRT.</li> <li>ERT/HRT has been shown to decrease total cholesterol and LDL and also increase HDL. However, ERT/HRT can increase triglyceride levels.</li> </ul>
SERMS	<ul> <li>Raloxifene, a SERM, has been shown to lower serum concentrations of total and LDL cholesterol but does not increase total HDL.</li> <li>There is currently no available evidence of raloxifene effect on CHD morbidity and mortality in humans.</li> </ul>

#### **Coronary Heart Disease (CHD)** "Prescription medications"

Statins	- Statins (e.g., pravachol, simvastatin, and atorvastatin) are effective for treating hypercholesterolemia and lowering cardiovascular risk.
Soy	<ul> <li>A meta-analysis of 38 controlled clinical trials reported a variable but significant decrease in total cholesterol, LDL cholesterol, and triglycerides following a high dietary intake of soy protein.</li> <li>Soy protein intake averaged 47 grams/day among the studies.</li> <li>More research is needed to determine optimum intake, but it seems safe for clinicians to encourage interested patients to consider including some soy protein in their diets.</li> </ul>

# Osteoporosis

Non-modifiable Risk Factors

**Potentially Modifiable Risk Factors** 

- Personal history of fracture as an adult
- History of fracture in first-degree relative
- Caucasian race
- Advanced age
- Female sex
- Dementia
- Poor health/frailty

- Current cigarette smoking
- Low body weight
- Estrogen deficiency
- Impaired eyesight
- Recurrent falls
- Inadequate physical activity
- Poor health/frailty

### Possible Interventions for Prevention and/or Treatment of Osteoporosis

#### Women should:

- Be counseled on risk factors for osteoporosis.
- Obtain an adequate intake of dietary calcium
- Obtain an adequate intake of vitamin D.
- Do regular weight-bearing and muscle-strengthening exercise.
- Be counseled on fall prevention (e.g., taping down rugs, using night lights, etc.).
- Stop smoking.
- Stop drinking alcohol.
- $\circ$  Be evaluated for osteoporosis with bone mineral density (BMD)
- Be considered candidates for osteoporosis treatment if they present with vertebral or hip fractures or if their BMD score is very low.

Risk factor
Calcium and Vitamin D
Exercise
Prevention of fall
Smoking cessation , alcohol
Bone mineral Density testing
Medication

## **Osteoporosis** "Prescription medications"

Raloxifene	<ul> <li>Raloxifene, a SERM, has been approved for the prevention and treatment of osteoporosis.</li> <li>It inhibits bone loss, and reduces the risk of vertebral fracture by about 40-50%.</li> <li>It is less effective than ERT/HRT, alendronate, or risedronate.</li> </ul>
Alendronate	<ul> <li>This bisphosphonate has been approved for prevention and treatment of osteoporosis.</li> <li>It inhibits bone loss in postmenopausal women, and increases BMD and decreases the risk of fracture in patients with osteoporosis.</li> <li>Well-conducted, controlled clinical trials indicate that alendronate reduces the risk of fracture at the spine, hip, and wrist by 50% in patients with osteoporosis.</li> </ul>
Risedronate	- This bisphosphonate is reported to be as effective as alendronate and did not cause more esophageal irritation than placebo in a randomized clinical trial.
Calcitonin	<ul> <li>Inhibits bone resorption, is delivered as a single daily intranasal spray.</li> <li>It is recommended for women greater than five years postmenopausal with low bone mass relative to healthy premenopausal women.</li> <li>Efficacy data for calcitonin are currently weaker than for ERT/HRT, alendronate, or risedronate.</li> </ul>

### **Possible Interventions for Prevention and/or Treatment of Other Diseases**

Stroke	- Evidence is inconsistent on the preventive effect of ERT/HRT on stroke.
Alzheimer's Disease	<ul> <li>There is some evidence that ERT/HRT may be protective against cognitive decline and the incidence of Alzheimer's disease, but further study is required.</li> <li>It does not seem appropriate at this time to use ERT/HRT solely for the prevention or treatment of dementia and cognitive decline.</li> </ul>
Age-Related Macular Degeneration	<ul> <li>Some scientists have suggested an association between age-related macular degeneration (AMD) and high saturated fat, low carotenoid pigments, and other substances in the diet.</li> <li>There is evidence that the consumption of fresh fruits and dark leafy vegetables may delay onset or reduce the severity of AMD, and antioxidants (e.g., vitamins C and E) may also help.</li> <li>Exposure to sunlight, smoking, and hypertension may worsen AMD.</li> <li>ERT/HRT may significantly reduce the risk of developing AMD.</li> </ul>

## Potential risks of pharmacologic agents

ERT/HRT	Alendronate & Risedronate	Raloxifene	Low-Dose Oral Contraceptives
<ul> <li>Breast Cancer.</li> <li>Endometrial Cancer.</li> <li>Deep Vein Thrombosis</li> <li>Gallbladder Disease</li> <li>Increase Triglyceride Level.</li> </ul>	<ul> <li>Upper Gastrointestinal Disturbance: esophageal symptoms (chest pain, heartburn, painful or difficult swallowing).</li> <li>Risedronate caused no more upper gastrointestinal symptoms than placebo. (RCT)</li> </ul>	<ul> <li>Deep Vein Thrombosis</li> <li>Raloxifene increases hot flashes in a small percentage of women.</li> </ul>	Serious risks, which are rare, include thrombophlebitis, pulmonary embolism, coronary thrombosis, retinal thrombosis, and stroke.

### Potential risks of pharmacologic agents

Statins	Clonidine	Bellergal
<ul> <li>Liver Damage</li> <li>Rare side effects are impaired liver function (which is usually reversible) and rhabdomyolysis with acute renal failure secondary to myoglobinuria.</li> </ul>	Frequent side effects include dry mouth, palpitations, drowsiness, dizziness, and hypotension.	The phenobarbital can be addicting, so bellergal should only be used for short periods of time.





# How do we counsel a patient?



G reat A sk T ell H elp E xplain R eturn

C lient-centered
L istening
I nteraction
E xploration
N onjudmental
T rust

## **Sequence of steps**

**Key elements** 

# Clinician's role:



- Answer all patient's questions in a respectful and informative manner.

- Provide scientific **information** with balance in presenting options of management without being biased.



Clarify the pros and cons of each **option** and simplify what is the latest updates in EBM and what is still unknown.

- Provide **education** regarding health conditions that are relevant (e.g. CVD) to

help her know the effect of these conditions on her life.





- Make the whole discussion **tailored** to fit her specifically including her social and family history.

- It is important to consider her **preferences**, **values** and main **concerns**.





- Consider what she **needs** and what she **wants**.

- Make sure the management plan is **practical** to her e.g. cost.

- Follow-up (interval depends on needs and concerns)

# Managed Care Organization's role:



- Developing **tools** that help **both** physicians and patients to improve decision making quality.

- Providing **clinicians** with **education** about best decision-making approach and essential components of counseling.

Providing enough time for counseling as much as possible with the provision of health educational programs.

# What should be covered in counseling? :



*Try to arrange topics to be covered in menopause counseling in a checklist that is detailed considering the tailored needs, preferences and thoughts of every woman individually.* 

Hot flashes/ sweats (day,night)
Vaginal Dryness/ Dyspareunia
Coronary Heart Disease (CHD)
Osteoporosis

## **References:**

- https://jamanetwork.com/journals/jama/fullarticle/2463262
- Jacobs Institute of Women's Health Expert Panel on Menopause Counseling. Guidelines for Counseling Women on the Management of Menopause. <u>http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.504.861&rep=rep1&type=pdf</u>
- <u>https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/lipid-disorders-in-adults-choleste</u> rol-dyslipidemia-screening
- https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/colorectal-cancer-screening
- https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/osteoporosis-screening
   1
- ACOG Recommendation for cervical cancer
- Garcia M, Mulvagh SL, Merz CN, Buring JE, Manson JE. Cardiovascular Disease in Women: Clinical Perspectives. *Circ Res.* 2016;118(8):1273-93.
- https://www.uscjournal.com/articles/assess-cardiovascular-risk-women
- Maas AH, Appelman YE. Gender differences in coronary heart disease. Neth Heart J. 2010;18(12):598-602.
- US Preventive Services Task Force. Screening for Cardiovascular Disease Risk With Electrocardiography: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2018;319(22):2308–2314. doi:10.1001/jama.2018.6848
- Wallace ML, Ricco JA, Barrett B. Screening strategies for cardiovascular disease in asymptomatic adults. *Prim Care*. 2014;41(2):371-97.
- Pannu J, Poole S, Shah N, Shah NH. Assessing Screening Guidelines for Cardiovascular Disease Risk Factors using Routinely Collected Data. *Sci Rep.* 2017;7(1):6488. Published 2017 Jul 26. doi:10.1038/s41598-017-06492-6.
- Doctor Aljohara Almeneessier slides.