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Ovarian Cancer: Treatment and Prevention

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How Common is Ovarian Cancer?

How Common is Ovarian Cancer?

- Ovarian cancer in the United States
 - 1:70 lifetime risk in general population*
- *Some populations are at much higher risk

Compared to...

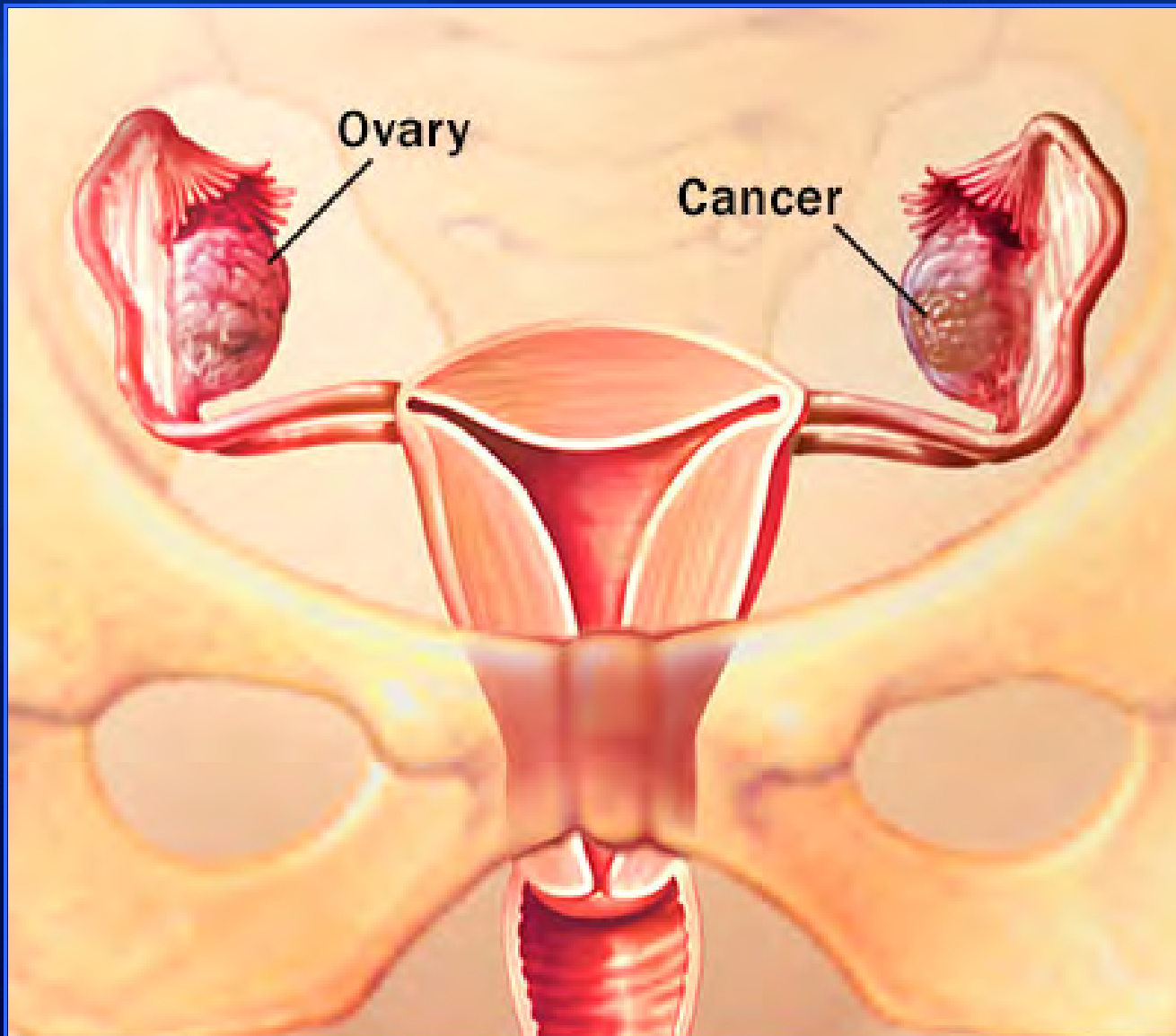
- Breast cancer
 - Most common women's cancer
 - Over 225,000 new diagnoses in 2012 in US
 - Nearly 40,000 will die of disease in 2012
 - **Lifetime risk: 1:6 women will develop breast cancer**

****Some women are at high risk for both ovarian and breast cancer**

The Diagnosis of Ovarian Cancer*

*The following section also applies to Primary Peritoneal Carcinoma and Fallopian Tube Carcinoma—all are treated the same

Ovarian cancer



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Ovarian Cancer—Diagnosis

- Signs and symptoms
 - Early symptoms vague
 - Lower abdominal discomfort, pressure
 - Lack of early detection methods
 - Symptoms in advanced stage
 - Abdominal distention
 - Bloating
 - Bowel and bladder symptoms
 - Nausea, anorexia, early satiety
 - Low back pain
 - Bowel obstruction

Ovarian Cancer Symptom Index

1. Bloating/increase in abdominal size
2. Pelvic/Abdominal Pain
3. Difficulty Eating/Feeling full quickly
4. Frequent or urgent urination

Sensitivity 56.7% for early-stage disease; 79.5% for advanced-stage disease.

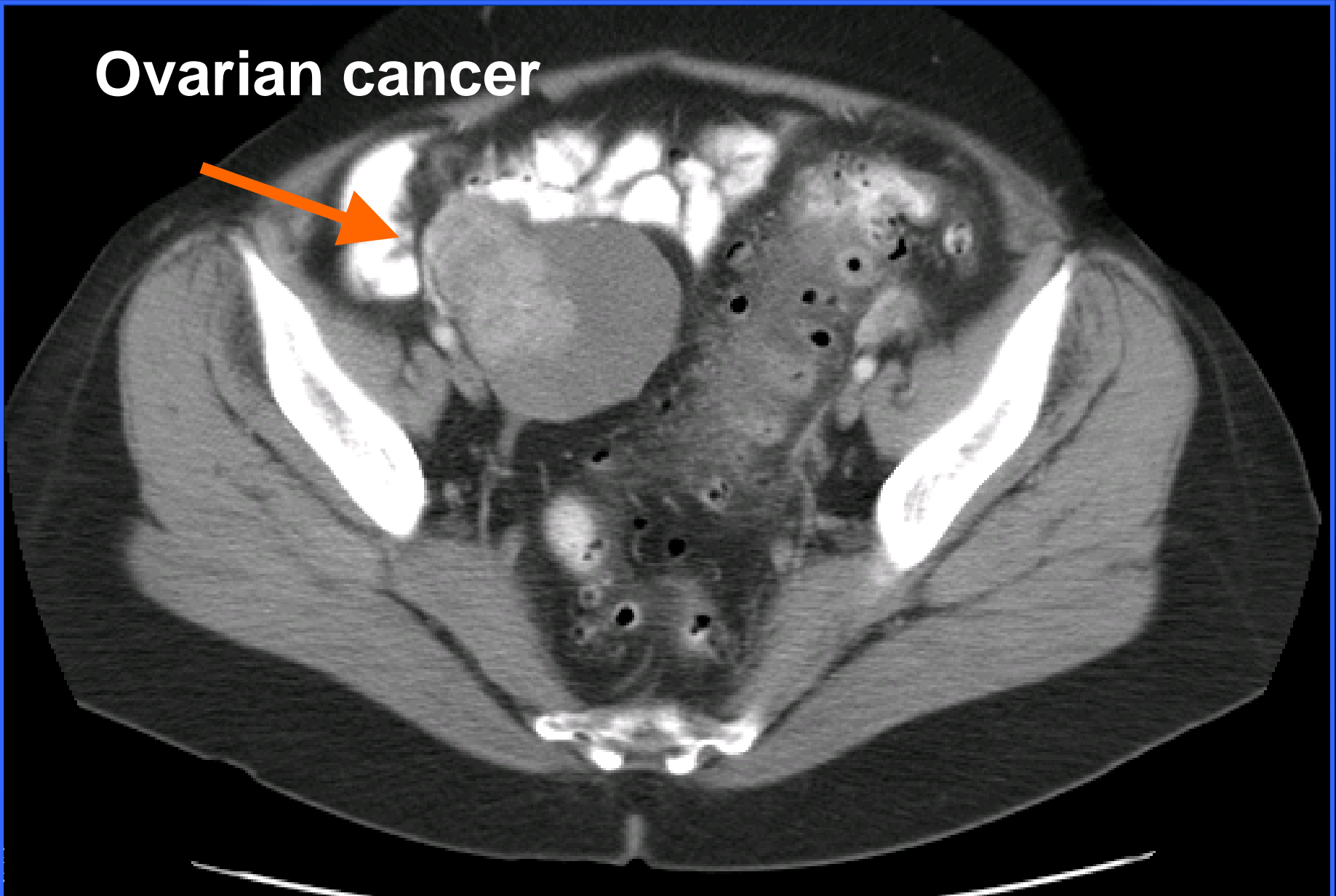
Specificity 90% for women age >50 years; 86.7% for women age <50 years.

Ovarian Cancer Work-Up

- Physical exam
 - Can sometimes feel a pelvic mass, abdominal mass on exam, abdominal fluid
- CA-125 level (normal is <35 U/mL)
- Imaging
 - Pelvic ultrasound—can show ovarian/adnexal mass
 - CT abdomen/pelvis—usually gives more global intra-abdominal information
 - MRI and PET/CT occasionally used as well

CT of the Pelvis

Ovarian cancer



The Management of Ovarian Cancer*

*Surgery followed by Chemotherapy

Surgery

Omentum location

Kidney

Para-aortic nodes

Aorta

Fallopian tube

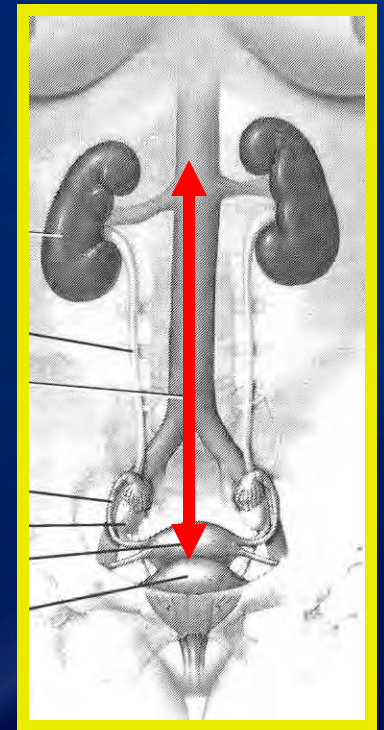
Ovary

Uterus

Bladder

Pelvic nodes

**Goal:
Cytoreduction to
minimal residual
disease**



**Via midline abdominal
incision**

Chemotherapy

- Very rare that surgery alone is used
 - Only stages IA and IB, grade 1 and sometimes grade 2, completely-staged (<10% of all ovarian cancers)
- First-line chemo for primary cases:
PLATINUM and TAXANE based chemo
“Carbo/Taxol”
- Can be given IV or IP (intraperitoneal)
- Can be given q3 weeks or weekly (“dose-dense”)
- **Open clinical trials should be considered as standard treatment due to high cancer recurrence rate**

Prevention of Ovarian Cancer*

*Who is at risk for ovarian cancer?

Which Women are at High Risk for Ovarian (and Breast) Cancer?

- Women with a family history
 - Up to 10% of ovarian cancers are caused by BRCA mutations
 - 15-20% of breast cancer is familial
 - 5-10% of breast cancers due to inherited gene
 - Up to 3% of breast cancers are caused by BRCA mutations

Lifetime Cancer Risk

BRCA1

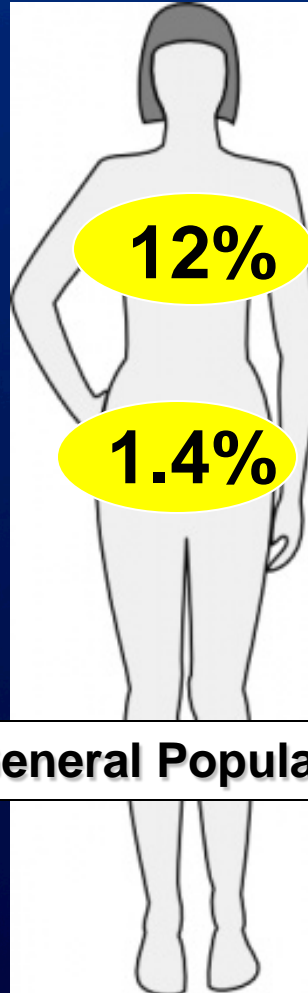
50-80%

35-60%

BRCA2

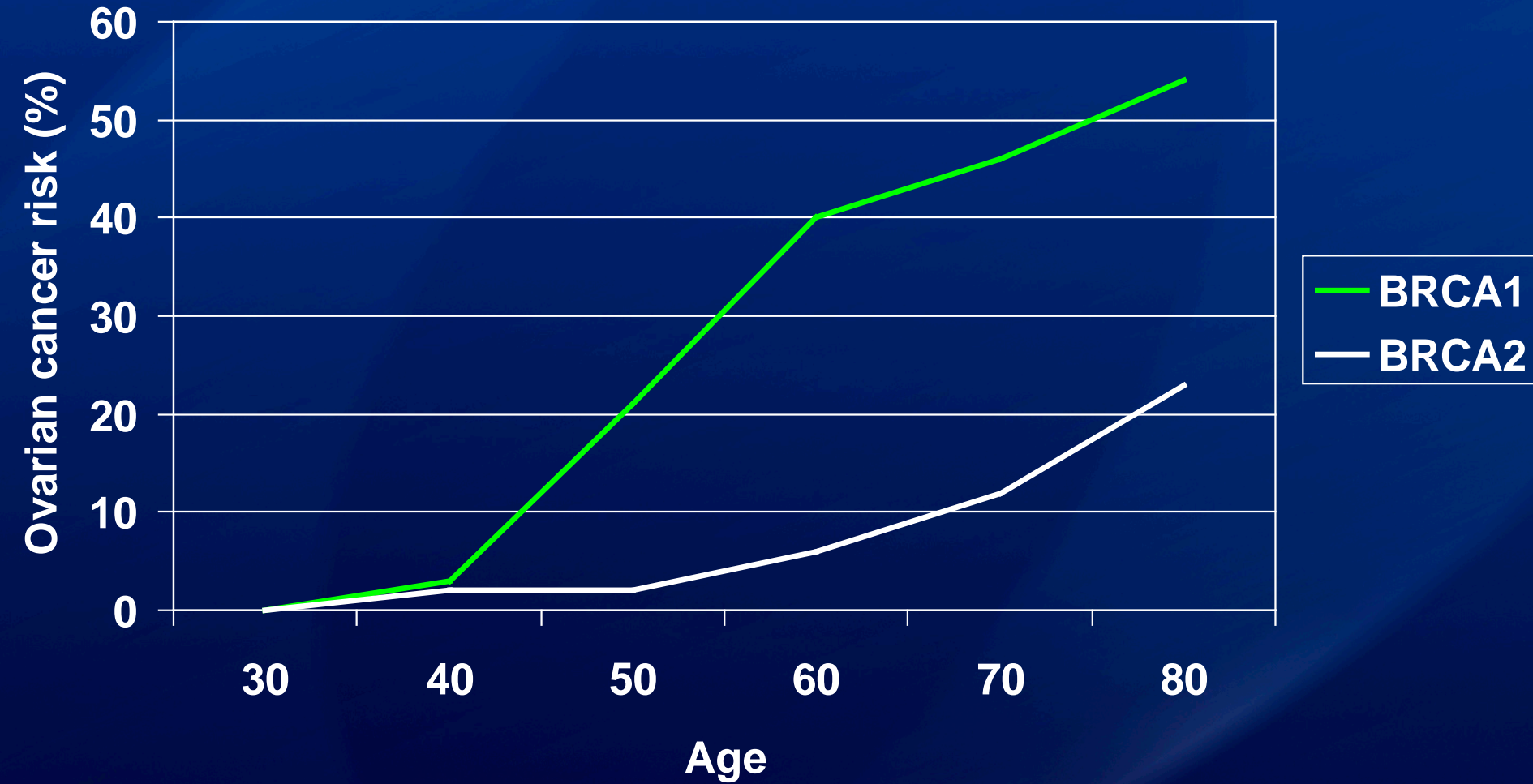
40-60%

10-30%



General Population

Ovarian Cancer Risk

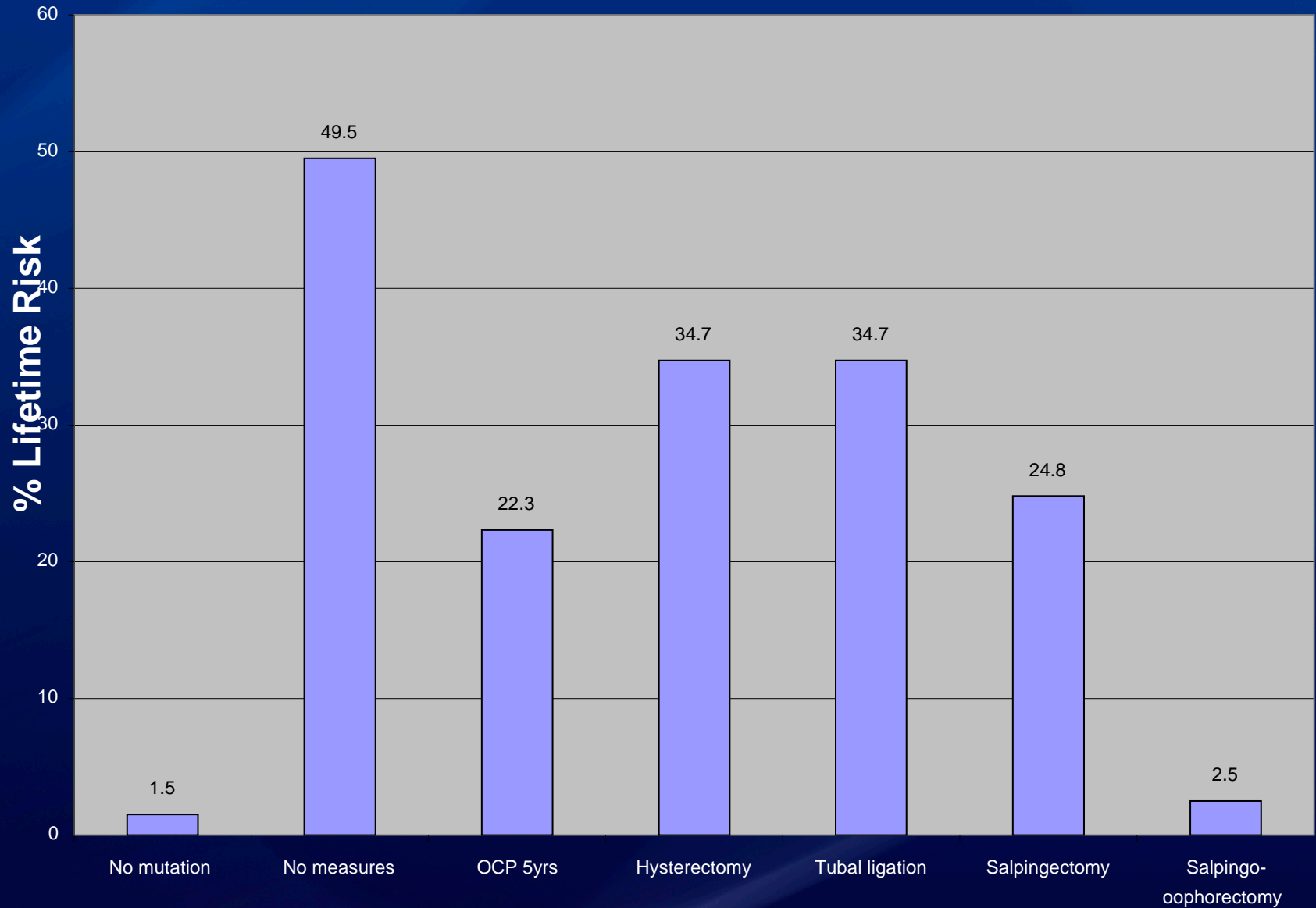


Could I have a BRCA mutation?

- Family history is important!
 - 2 or more women with ovarian or breast cancer before the age of 50
 - Breast and ovarian cancer in the same woman
 - Male breast cancer
 - Ashkenazi Jewish women with breast cancer before age 50
- BRCA prevalence in women not of Ashkenazi descent: 1:800
- BRCA prevalence in women of Ashkenazi descent: **1:40**

Risk-Reducing Measures—Ovarian cancer

Ovarian Cancer Risk with BRCA1





Lynch Syndrome

- Also called “Hereditary Non-Polyposis Colon Cancer” (HNPCC)
- Increased risk of endometrial, ovarian, colon, urinary tract, GI tract cancers
 - Ovarian cancer risk: 3-14% lifetime
 - Endometrial cancer risk: 27-71% lifetime
- Risk-reducing surgery recommended to prevent gyn cancers
- Surveillance prior to surgery: annual endometrial biopsy; pelvic exam, pelvic U/S, CA-125 every 6-12 months

Risk-Reducing Bilateral Salpingo-Oophorectomy: The Most Effective Approach to Preventing Ovarian Cancer

RRSO Dramatically Reduces the Risk of Ovarian Cancer in BRCA Mutation Carriers

- **BRCA1**—ovarian cancer risk
 - 85% reduction in women who had prior breast cancer
 - 69% reduction in women with no prior breast cancer
- **BRCA2**—ovarian cancer risk
 - 100% reduction in all women, regardless of prior breast cancer status

RRSO Also Reduces the Risk of Breast Cancer in BRCA Mutation Carriers

- Breast cancer
 - BRCA1—37% reduction in first breast cancer
 - BRCA2—64% reduction in first breast cancer

Breast Cancer Surveillance and Risk Reduction Surgery: High Risk Population

Options for Breast Cancer Surveillance

- Monthly breast self-exams (begin by age 18) and
- Early clinical surveillance (begin at age 25)
 - Annual or semi-annual clinical breast exams
 - Annual mammography
 - Annual breast MRI (beginning age 30)
 - Or alternate breast MRI with mammograms every 6 months

Bilateral Prophylactic Mastectomy

- Early data:
Reduces breast cancer risk by 90-95% in women with a strong family history
- In BRCA mutation carriers:
 - Dramatic reduction in breast cancer risk with 3 years prospective follow-up

<u>1693 BRCA carriers</u>	<u>Cancers</u>
247 BPM	0 (0%)
1372 No BPM	98 (7.1%)

In Summary

1. The signs/symptoms of ovarian cancer can be vague.
2. Ovarian cancer is treated with a combination of surgery and chemotherapy.
3. Ovarian cancer risk is highest in BRCA carriers.
4. There are several ovarian cancer risk reducing strategies.
5. Risk reducing salpingo-oophorectomy is the most effective strategy to prevent ovarian cancer
6. Bilateral prophylactic mastectomy dramatically reduces breast cancer risk in BRCA carriers

Additional Important Points...

- There is not an effective screening test for ovarian cancer
- Women with ovarian cancer should be treated by a Gynecologic Oncologist

Thank you!

Helpful Websites for Women and Their Providers

- Minnesota Ovarian Cancer Alliance
www.mnovarian.org
- Foundation for Women's Cancer
www.foundationforwomenscancer.org
- Society of Gynecologic Oncology
www.sgo.org
- Women's Cancer Network
www.wcn.org