
به نام خدا

BREAST CANCER Screening

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شیوع سرطان پستان

- در زنان شایعترین سرطان پس از سرطان غیر ملانومی پوست است.
- پس از سرطان ریه دومین علت مرگ براثر سرطان است.
- در نژاد سیاه و یهود شایعتر است.
- در کشورهای پیشرفته بیشتر است. در ژاپن کم است.
- سن متوسط درگیری ۶۰ سال است.
- با افزایش سن احتمال ابتلا افزایش می یابد.
- احتمال ابتلا درکل زندگی یک هشتم است. مرگ ۱/۲۸

عوامل مستعد کننده سرطان پستان

- ✓ سابقه فامیلی
- ✓ سابقه سرطان پستان – تخمدان و آندومتر
- ✓ عدم سابقه زایمان
- ✓ اولین حاملگی پس از ۳۰ سالگی
- ✓ قاعدگی زودرس(قبل از ۱۲سالگی)
- ✓ یائسگی دیررس
- ✓ جایگزینی هورمونی دردوره یائسگی
- ✓ سبک زندگی(کم تحرکی) - تغذیه
- ✓ چاقی
- ✓ مصرف الکل
- ✓ قرصهای ضد بارداری؟؟

TABLE 14.9 Major Risk Factors for Breast Cancer

Older age
Family history of breast cancer
Benign breast disease
Proliferative changes
Atypical hyperplasia
Endogenous endocrine factors
Early menarche
Late menopause
Long menses duration
Nulliparity
Late maternal age at first pregnancy
Exogenous hormones?
Oral contraceptives
Estrogen replacement therapy

TABLE 14.10 Breast Cancer Risk Factors

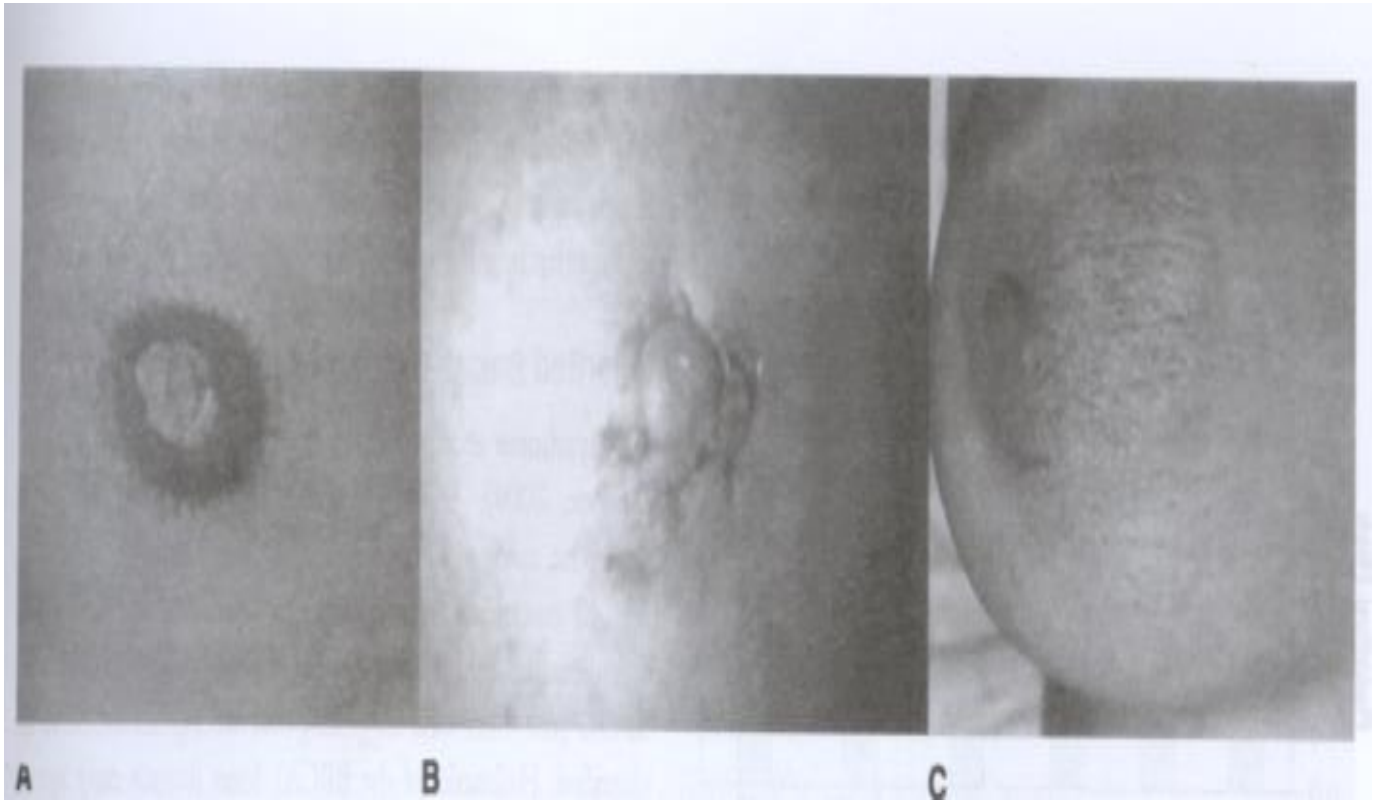
PERSONAL AND FAMILY HISTORY FACTORS WITH A RELATIVE RISK OF >4.0
Certain inherited genetic mutations for breast cancer
Two or more first-degree relatives with breast cancer diagnosed at an early age
Personal history of breast cancer
Age (≥65 years versus <65 years, although risk increases across all ages until age 80 years)
PERSONAL AND FAMILY HISTORY FACTORS WITH A RELATIVE RISK OF 2.1–4.0
One first-degree relative with breast cancer
Nodular densities seen on mammogram (>75% of breast volume)
Atypical hyperplasia
High-dose ionizing radiation administered to the chest
Ovaries not surgically removed before age 40 years
PERSONAL AND FAMILY HISTORY FACTORS WITH A RELATIVE RISK OF 1.1–2.0
High socioeconomic status
Urban residence
Northern US residence
REPRODUCTIVE FACTORS THAT INCREASE RELATIVE RISK
Early menarche (<12 years)
Late menopause (≥55 years)
No full-term pregnancies (for breast cancer diagnosed at age 40+ years)
Late age at first full-term pregnancy (≥30 years)
Never breastfed a child
OTHER FACTORS THAT AFFECT CIRCULATING HORMONES OR GENETIC SUSCEPTIBILITY
Postmenopausal obesity
Alcohol consumption
Recent hormone replacement therapy
Recent oral contraceptive use
Being tall
Personal history of cancer of endometrium, ovary, or colon
Jewish heritage

Data from American Cancer Society. *Breast cancer facts & figures 2001–2002*. Atlanta, 2001. Author; Hulka BS, Stark AT. Breast cancer:

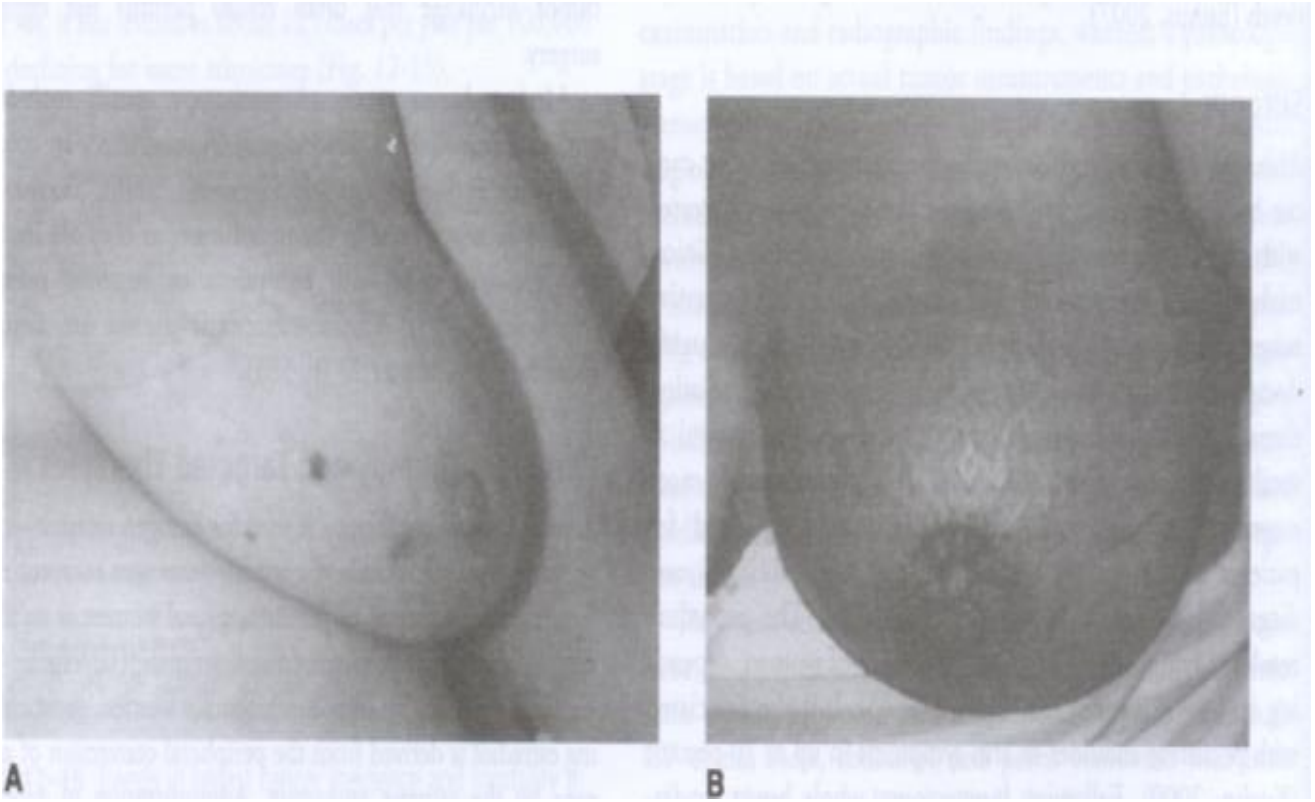
علایم و نشانه های سرطان پستان

- بیشتر بیماران بدون علامت هستند و در ماموگرافی تشخیص داده می شوند.
- توده بدون درد که توسط خود بیمار شناسایی می شود.
- درد ، قرمزی ، التهاب و یا بزرگی پستان
- ترشح و یا تغییرات نوک پستان
- چسبندگی توده به پوست بانمای پوست پرتقال
- بزرگی غدد لنفاوی آگزیلرودر موارد پیشرفته غدد بالا یا پایین کلاویکول

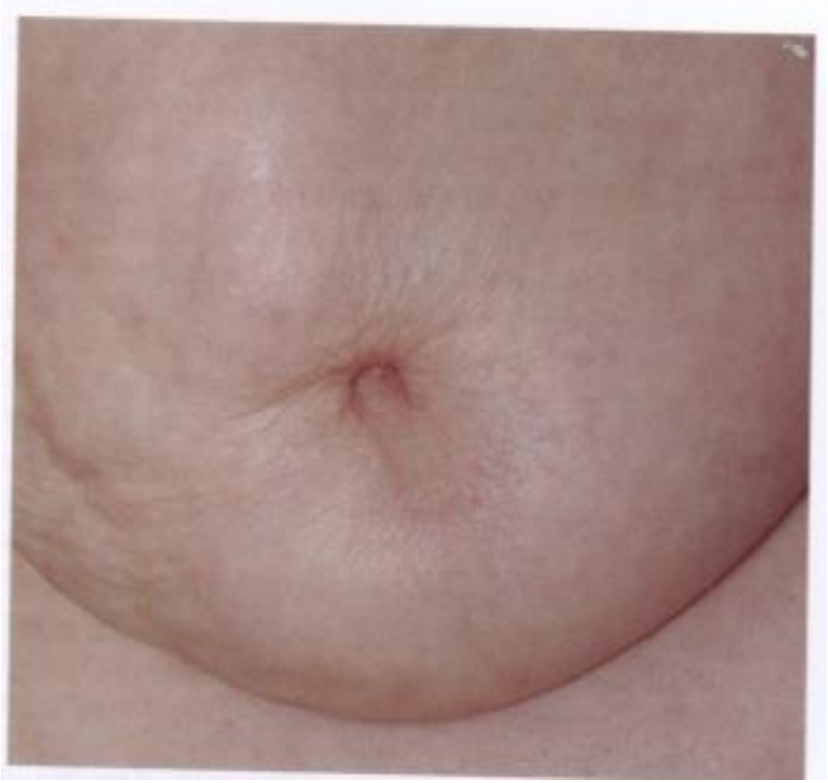
پاژه پستان



سرطان التهابی پستان



فرو رفتگی نوک پستان در اثر سرطان



غربالگری سرطان پستان

- باعث ۴۵%کاهش مرگ ومیر در زنان ۴۰-۶۰سال شده است.
- ۱۰-۵۰% سرطانهای شناخته شده با ماموگرافی با معاینه تشخیص داده نمی شوند.
- ۱۰-۲۰%سرطانهایی که با معاینه تشخیص داده شده اند در ماموگرافی مشاهده نشده اند.

Triple test : physical examination-mammography-biopsy

روشهای غربالگری سرطان پستان

- معاینه فیزیکی
- معاینه توسط خود فرد
- ماموگرافی
- (سونوگرافی و MRI در موارد خاص)

معاینه فیزیکی

Table 4.1 COMPONENTS OF THE MEDICAL HISTORY OF A BREAST PROBLEM

enarche
of pregnancies
of live births
rst birth
istory of breast cancer, including affected relative, age of onset, and
e of bilateral disease
f breast biopsies (and histologic diagnosis, if available)

usal Women
ast menstrual period
nd regularity of cycles
al contraceptives

ausal Women
enopause
ormone replacement therapy

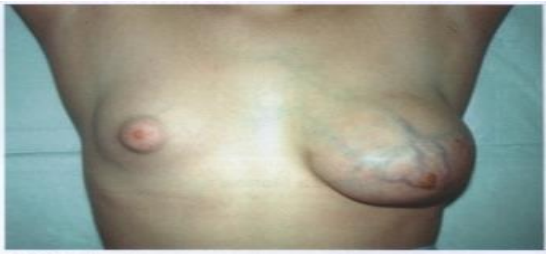


FIGURE 4.2. Marked breast asymmetry owing to a benign breast tumor.

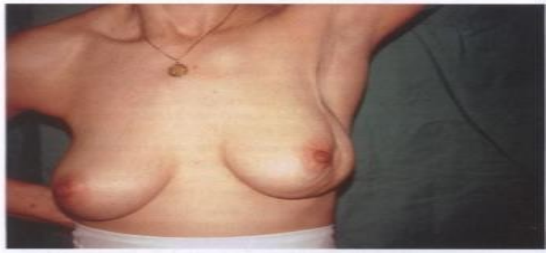


FIGURE 4.3. Breast retraction caused by thrombophlebitis of the thoracoepigastric vein (Mondor's disease). Seen is the characteristic pattern of lateral retraction superior to the nipple and crossing to the midline below the nipple.

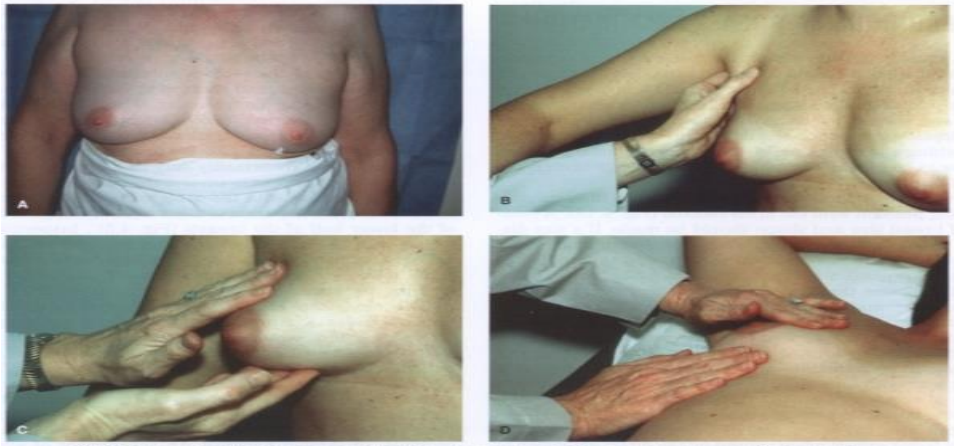
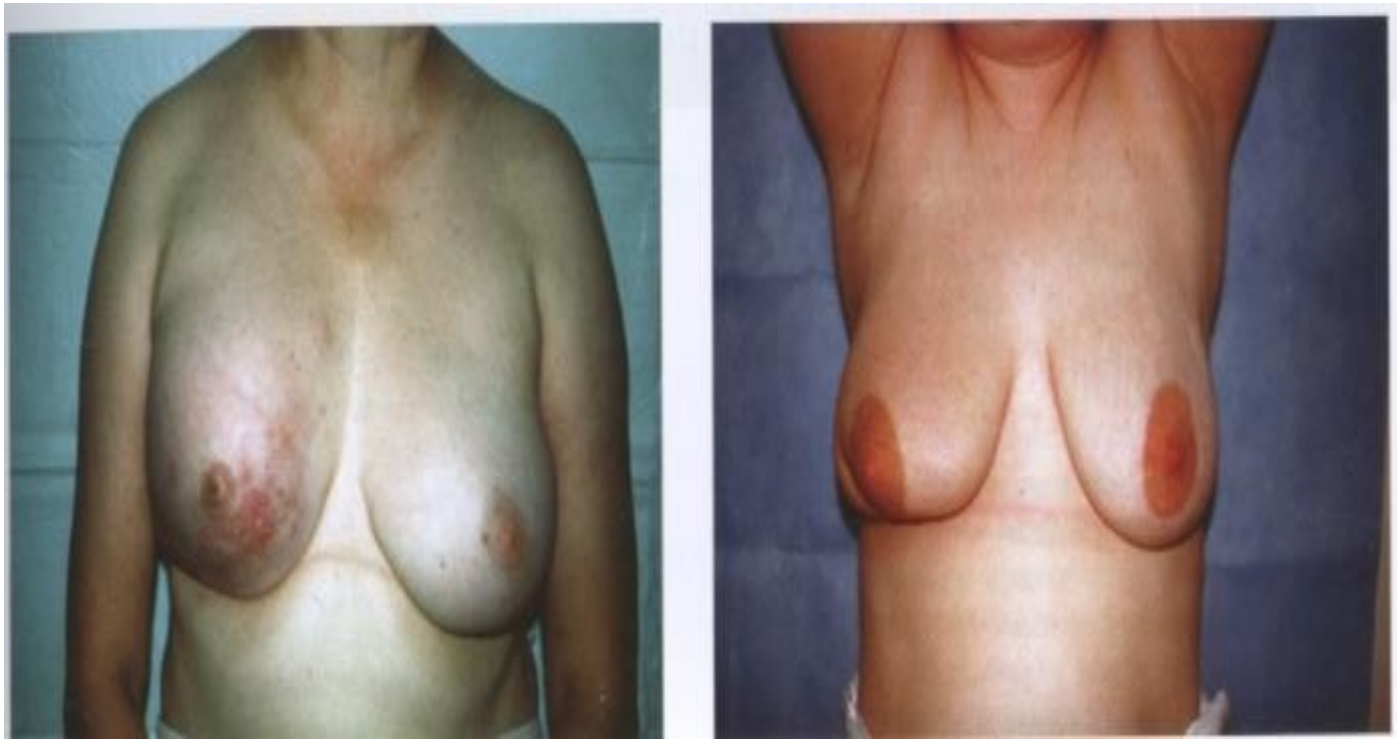


FIGURE 4.1. Inspection of the patient in the upright position with arms relaxed (A). Palpation of the axillary nodes (B). The patient's ipsi-

معاینه فیزیکی



Breast self examination

7-10 days after menstural beginning

Containing seven {p} s

Position

Palpation

Pads of fingers

Pressure

Perimeter

Pattern of search

Patient education

Breast self examination

mammography

Bi-rads criteria

۰-نامشخص-نیاز به بررسی بیشتر

۱-منفی

۲-خوش خیم

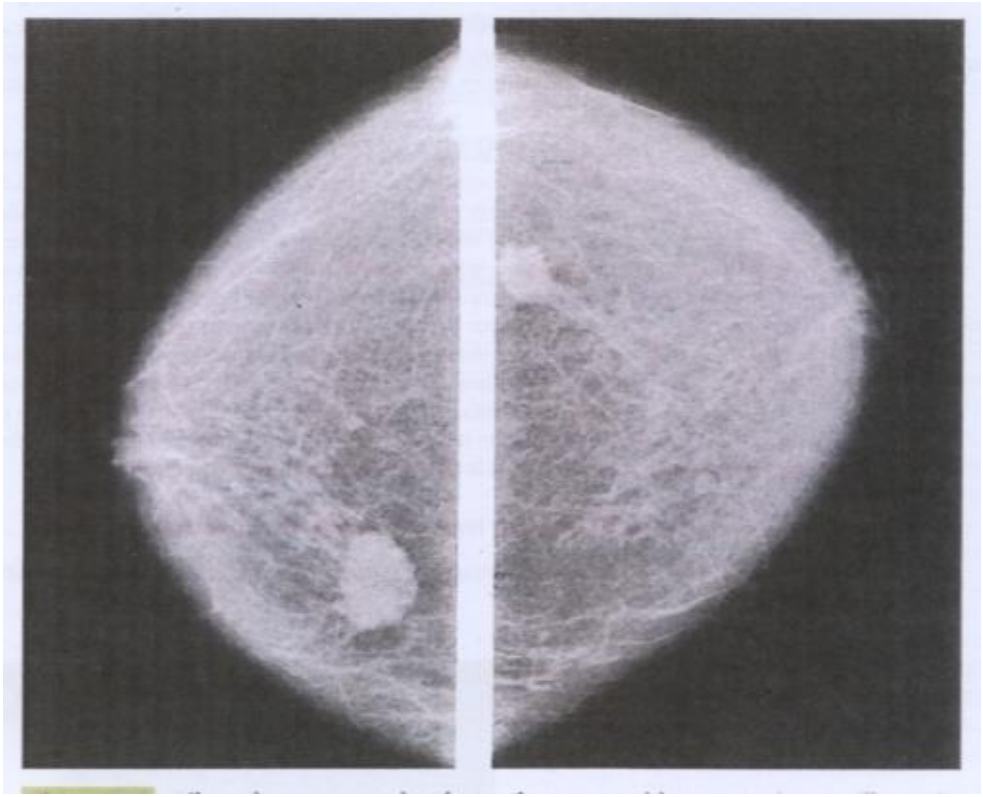
۳-احتمالا خوش خیم ، نیز به پیگیری دارد

۴-مشکوک ، نیازبه بیوپسی دارد

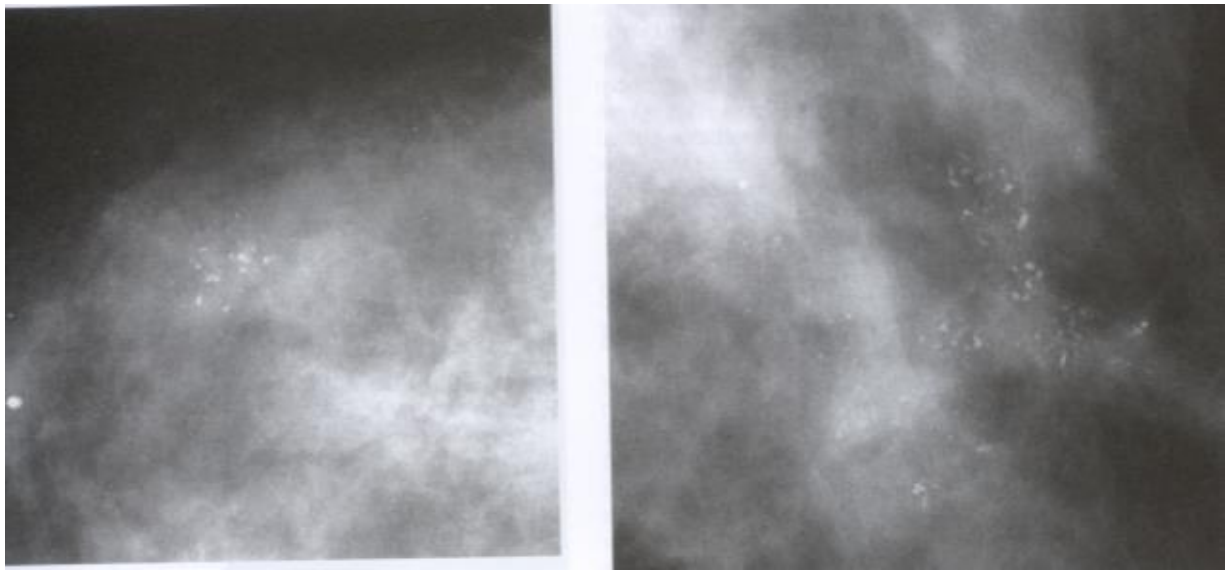
۵-شک قوی به بدخیمی ، نیاز به اقدام مناسب

۶-بدخیمی شناخته شده (بررسی عود)

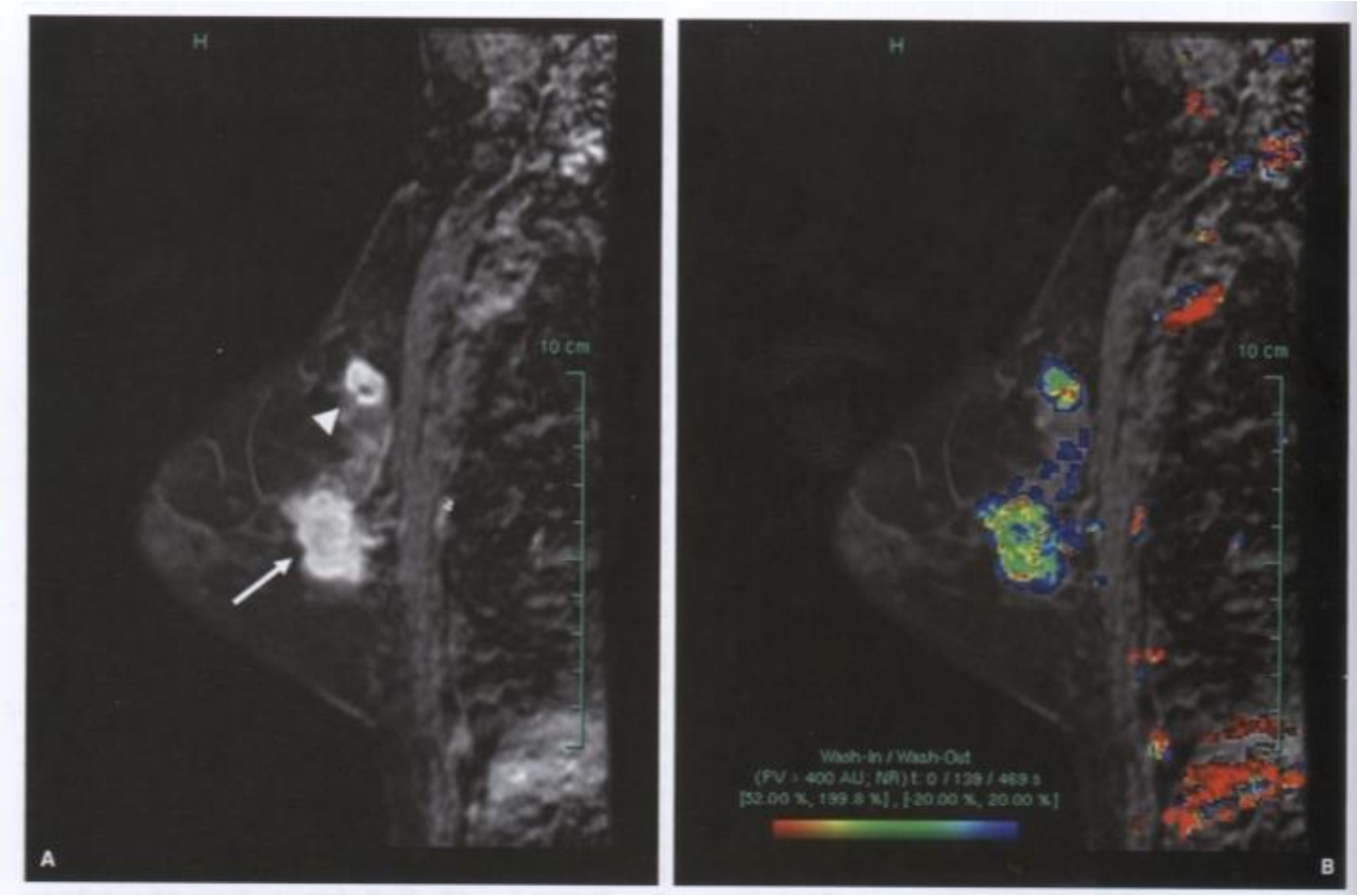
توده پستان در مامو گرافی



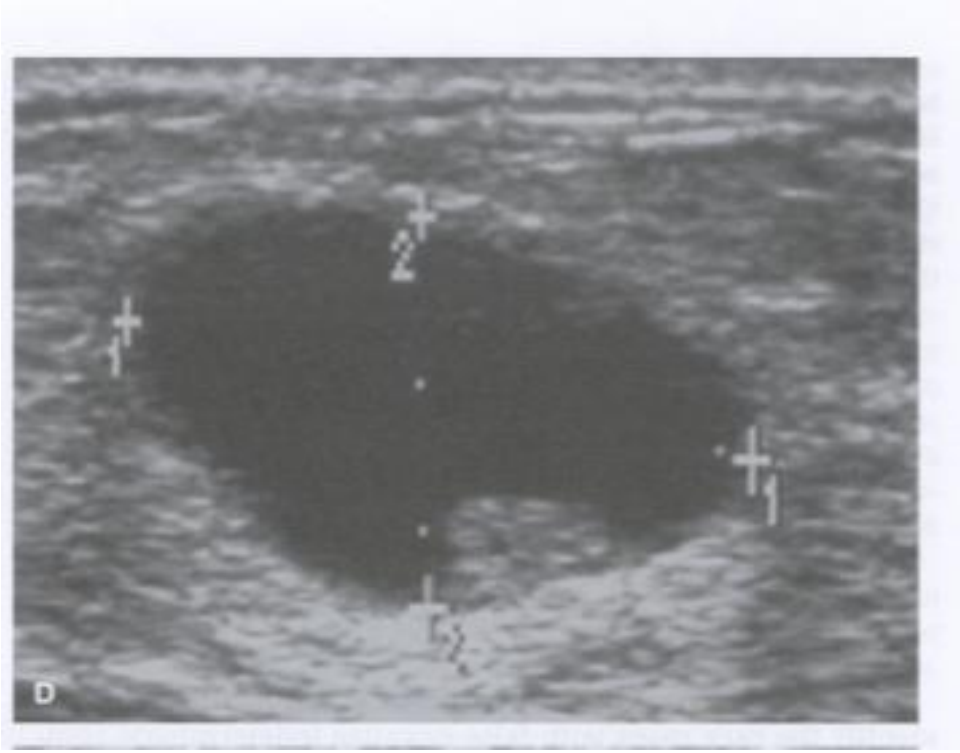
کلسیفیکاسیون در سرطان پستان



MRI – توده پستان



سونوگرافی پستان (کیست و ضایعه توپر)



BREAST CANCER& HORMON THERAPY

BEATSON 1896..OOPHORECTOMY

ER positive is not always responsive???

Sources other than ovary

PR positive

HER2neu

Triple negative..10-15% of cancers with high mortality, ,,Chemotherapy

OVARIAN ABLATION

1996..GNRH OR RADIATION <50Y…recurrence decreased

OVARIAN ABLATION plus Tamoxifen…flush, musculoskeletal, HTN, depression

Tamoxifen

Letrozole

Hereditary breast cancer

10% of new cases..

BRCA1 ..cr17, 80% in younger than 50y, 80-90% triple negative

BRCA 2..cr13, cancer in men, 80% hormon positive

Prognosis ..ovary…breast

Oophorectomy, tamoxifen and age can reduce recurrence or contralateral involement

Tamoxifen..endometrial cancer(2.5 fold), vascular events, no hip fracture…Raloxifen

Oophorectomy…40y..(35)..50% breastBRCA1&80% ovary…2%PPC

Ovarian screening..CA125 –sonography---

Advanced breast cancer and oophorectomy…bone metstasis

Guideline of screening breast cancer

Table 40.1 Screening Recommendations

Bilateral mammograms
Beginning at age 40 yearly mammograms, which should continue as long as the patient is in good health.
Self-examination
Is an option for women starting in their 20s. Women should be counseled on the benefits and limitation of breast self-examination and should be told to report any changes in their breasts to their health professional right away.
Clinical breast examination
Age 20–40 examination by physician every 3 years, annually if positive history (May do annually if there is a positive family history) **Age ≥ 40** examination by physician every year
Breast magnetic resonance imaging (MRI)
High risk women (greater than 20% lifetime risk) should undergo MRI and mammography every year **Medium risk women (15%–20% lifetime risk)** should talk to their health care professional about the benefits and limitations of adding MRI to their yearly mammographic screening. **Low risk women (less than 15% lifetime risk)** are not recommended to undergo additional MRI screening.

From American Cancer Society Screening Guidelines. **Smith RA, Cokkinides V, Brooks D, et al.** Cancer screening in the United States, 2010: a review of current American Cancer Society Guidelines and Issues in Cancer Screening. *CA Cancer J Clin* 2010;60:99–119.

راهنمای غربالگری سرطان پستان

- **معاینه توسط خود فرد**
  - ✓ از ۲۰ سالگی ماهیانه
- **معاینه فیزیکی پستان توسط پزشک**
  - ✓ از ۴۰-۲۰ سالگی هر ۳ سال
  - ✓ بعد از ۴۰ سالگی سالیانه
- **ماموگرافی دو طرفه**
  - ✓ از ۴۰ سالگی سالیانه
- **MRI در افراد با سابقه فامیلی یا سابقه سرطان**
  - ✓ افراد با ریسک بالا (۲۰٪) سالانه مامو گرافی و MRI
  - ✓ افراد با ریسک متوسط(۱۵-۲۰٪) ماموگرافی سالانه و در صورت نیاز MRI سالانه
  - ✓ افراد با ریسک کمتر از ۱۵٪ غربالگری با MRIتوصیه نمی شود.

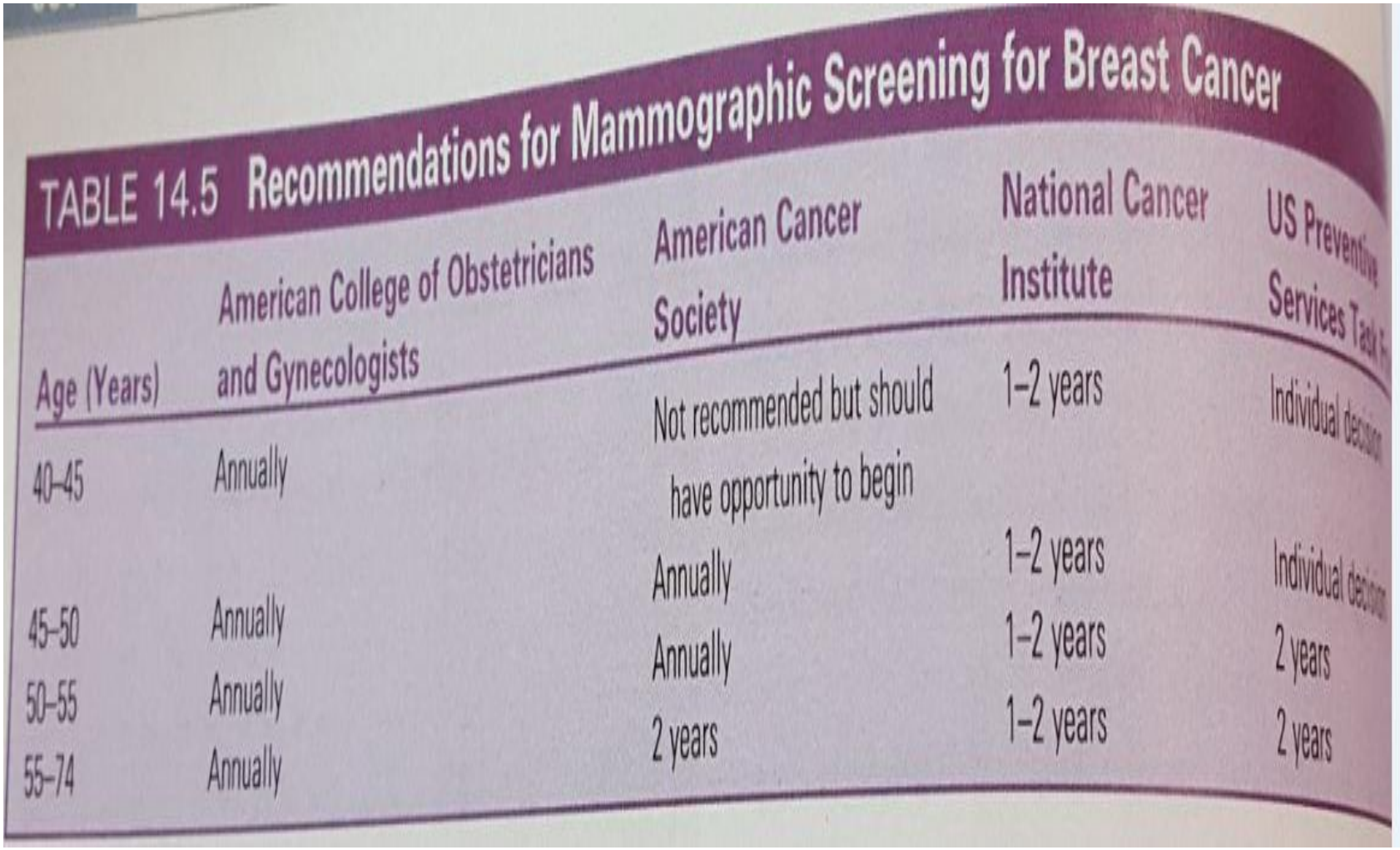


TABLE 14.5 Recommendations for Mammographic Screening for Breast Cancer

Age (Years)	American College of Obstetricians and Gynecologists	American Cancer Society	National Cancer Institute	US Preventive Services Task F
40–45	Annually	Not recommended but should have opportunity to begin	1–2 years	Individual decision
		Annually	1–2 years	Individual decision
45–50	Annually	Annually	1–2 years	2 years
50–55	Annually	2 years	1–2 years	2 years
55–74	Annually			

Society and expert recommendations for routine mammographic screening in women at average risk

Group (date)	Frequency of screening (years)	Initiation of screening for women at average risk		
		40 to 49 years of age	50 to 69 years of age	≥70 years of age
Government-sponsored groups				
US Preventive Services Task Force (2016)[1]	2	Individualize*	Yes	Yes, to age 74
Canadian Task Force on Preventive Health Care (2018)[2]	2 to 3	Recommend against*	Yes	Yes, to age 74
National Health Service, United Kingdom (2018)[3]	3	Yes, start age 47	Yes	Yes, to age 73
Royal Australian College of General Practitioners (2018)[4]	2	No	Yes	Yes, to age 74
Medical societies				
American College of Obstetricians and Gynecologists (2017)[5]	1 to 2*	Individualize*	Yes	Yes, to at least age 75¶
American College of Physicians (2019)[6]	2	Individualize*	Yes	Yes, to age 74
American Academy of Family Physicians (2019)[7]	2	Individualize*	Yes	Yes, to age 74
American Cancer Society (2015)[8]	1 year age 45 to 54 1 to 2 years age ≥55	Individualize* through age 44 Yes, start age 45	Yes	YesΔ
American College of Radiology (2017)[9]	1	Yes	Yes	Yes◊
Coalitions				
National Comprehensive Cancer Network (2018)[10]	1	Yes	Yes	Yes

* Women should be counseled about the harms and benefits of mammography; individualized decisions should include shared decision-making based on risks, benefits, patient values and preferences.

¶ Decision to discontinue screening mammography should be based on a shared decision-making process informed by the woman's health status and longevity.

Δ If in good health and life expectancy >10 years.

TABLE 14.6 Screening Guidelines for Women Younger Than Age 40 Years

Condition	Timing of Annual Mammography
Lobular cancer in situ or breast cancer diagnosis	At time of diagnosis
First-degree relative with premenopausal breast cancer	10 years earlier than relative's age at diagnosis but not younger than 25 years
Mantle irradiation for Hodgkin disease	8 years after completion of radiation therapy
BRCA1 or *BRCA2* mutation	Age 25–35 years; specific age chosen based on adequacy of mammography imaging in the first study and patient choice


THANK YOU
FOR YOUR
ATTENTION