

# Breast Fibroadenomas in Mammography

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## Introduction to Breast Fibroadenomas

- Breast fibroadenomas are the most popular benign (non-cancerous) tumor of the female breast (Rangaswamy & Rubby, 2016).
- Painless, unilateral, and solid lump
- Breast fibroadenomas can occur in women between the ages of 14 to 35 but can be discovered in the breast at any age (Ajmal & Fossen, 2018).
- Often referred to as a breast mouse due to their high mobility (Gupta, Zhang, & Huang, 2019)
- Breast fibroadenomas are made up of epithelial and stromal (connective) tissue (Gupta, Zhang, & Huang, 2019).
- They tend to shrink after a woman goes through menopause (American Cancer Society, 2020).

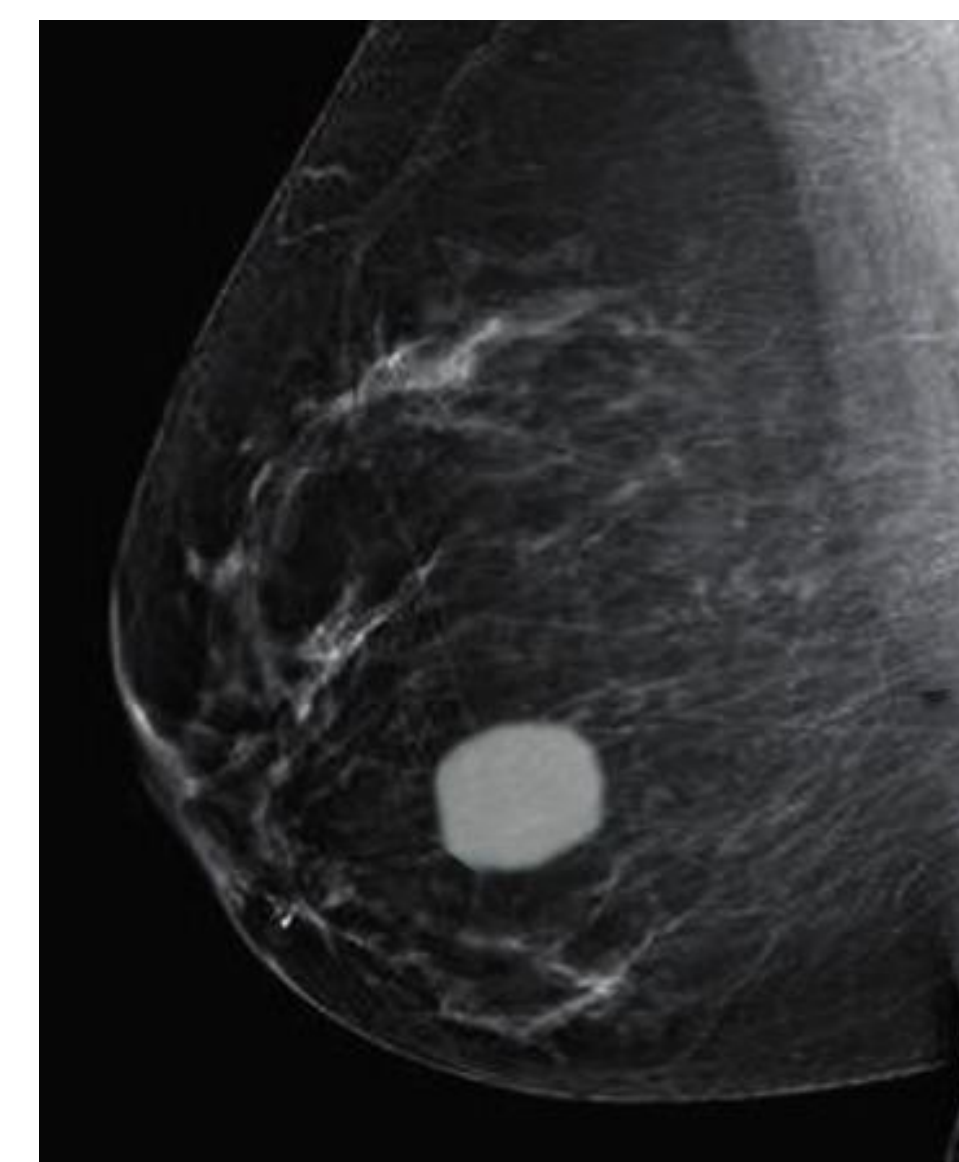


## Types of Breast Fibroadenomas

- Four types:
  - Complex fibroadenoma
    - Quickly forming hyperplastic cells
  - Juvenile fibroadenoma
    - Commonly found in patients between the ages of 10 and 18
    - Have a quicker growing rate
    - Ultimately shrink or disappear
  - Giant fibroadenoma
    - Benign lesion that is slightly bigger than the other types
    - Generally needs excision because it reduces or replaces normal breast tissue
  - Phyllodes tumor
    - A connective tissue tumor of the breast that can be either benign or malignant
    - Not a fibroadenoma, so it needs to be observed carefully
    - Doctors advise removing it

## Diagnosis

- Some fibroadenomas are too small to be touched, but some are several inches across (American Cancer Society, 2020).
- In the breast, they can feel like a marble.
- Can be round and have clear-cut borders (American Cancer Society, 2020)
- They can be moved under the skin and are typically firm or rubbery, but not tender (American Cancer Society, 2020).
- Can exist in one or both breasts
- The cause of fibroadenomas are controversial, but professionals believe that the lesion has a hormonal etiology connected to the increased sensitivity of breast tissue to the female reproductive hormone called estrogen (Ajmal & Fossen, 2018).



Ajmal & Fossen, 2018, p. 4



Deborah, M., Radiopaedia, 2020, p. 1

The lesions seen in this mammogram are all fibroadenomas.

## Treatment

- There is no medical treatment and medicines to decrease the lumps (Gupta, Zhang, & Huang, 2019).
- Surgical excision of the lumps is only required if:
  - Fibroadenomas are getting larger in size (Gupta, Zhang, & Huang, 2019)
  - Becoming painful to the patient (Gupta, Zhang, & Huang, 2019)
- There is any confusion between breast fibroadenomas and other health conditions (Gupta, Zhang, & Huang, 2019).
- Eliminating breast fibroadenomas may consist of removing plenty of adjacent normal breast tissue, which can lead to scarring (American Cancer Society, 2020).
- This can change the shape and texture of the breast making mammograms difficult to interpret (American Cancer Society, 2020).
- Fibroadenomas can also be left in place and observed to be certain they do not grow. This approach is beneficial to women with several fibroadenomas that are not growing (American Cancer Society, 2020).
- It is crucial for women with breast fibroadenomas to partake in regular breast examinations or imaging tests to ensure that the fibroadenomas are not growing (American Cancer Society, 2020).

## Differential Diagnosis

- A breast fibroadenoma can be confused with:
  - Breast cyst
  - Breast carcinoma
  - Phyllodes tumor
  - Breast lymphoma
- Metastasis to the breast from another primary site

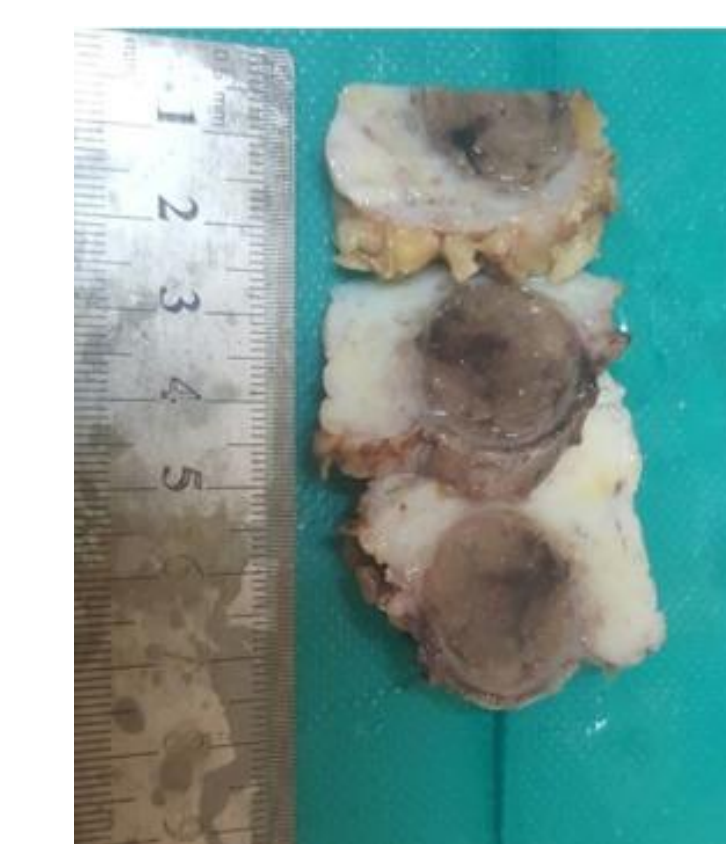
(Ajmal & Fossen, 2018)

## Complications

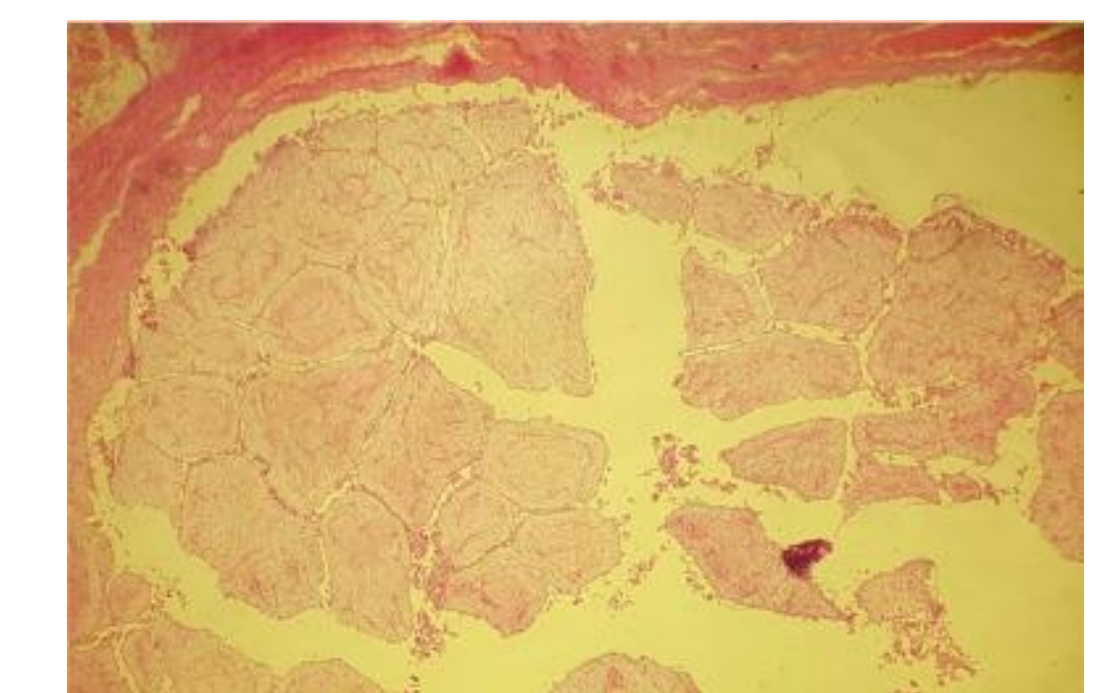
- Slight increase of a breast cancer risk in patients with a complex fibroadenoma (Ajmal & Fossen, 2018).
- Complex fibroadenoma may contain calcified breast tissue (Ajmal & Fossen, 2018).

## Case Report

- A 26-year-old female presented to a surgical clinic with a lump in her right breast with abrupt growth in size for two weeks. When examined, there was a well distinct, irregular lump measuring 6 x 3 cm and a firm to hard in uniformity was discovered (Salih & Kakamad, 2016).
- The other breast was normal with no problems and the axillary lymph nodes were not palpable (Salih & Kakamad, 2016).
- Ultrasound confirmed the clinical diagnosis of a benign breast fibroadenoma and an excisional biopsy was planned to remove the fibroadenoma (Salih & Kakamad, 2016).
- A macroscopical examination presented irregular soft mass with a yellow-grey color measuring 6 x 3 x 3 cm (Salih & Kakamad, 2016).
- The cut surface possessed a brown color with a hemorrhagic area (Salih & Kakamad, 2016).
- There was a distinct nodule with an evenly spread-out acini & ducts linked with areas of widespread hemorrhage & ischemic necrosis of the center with fibroblastic & granulation tissue enclosing glands (Salih & Kakamad, 2016).



Cut surface shows brown color with hemorrhagic area (Salih & Kakamad, 2016, p. 3)



Distinct nodule with well defined acini and ducts related with areas of extensive hemorrhage and ischemic necrosis (Salih & Kakamad, 2016, p. 3)

## Conclusion

- Breast fibroadenomas are one of the most common lumps found in women of all ages. Although most are benign, fibroadenomas should be closely examined for any changes. They are made up of stromal and epithelial tissue. There are four types of breast fibroadenomas, which each have their own distinct features.