# Breast discharge and mastalgia

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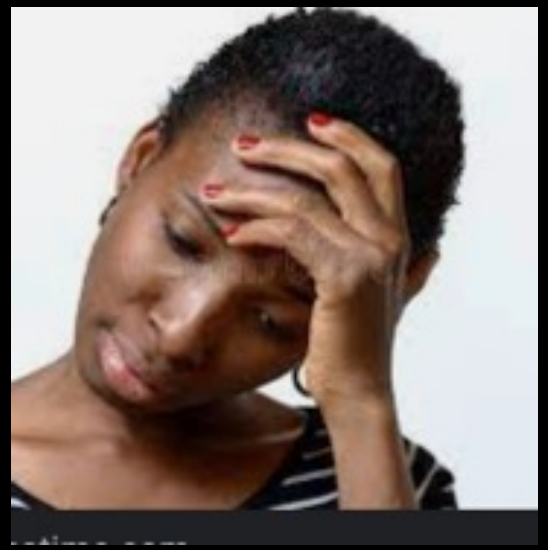



THAT'S NOT VERY REASSURIING

# Nipple discharge

- Common but rarely associated with underlying carcinoma
- Men are an exception !!!
- Classification.
  - ❖ Lactational
  - ❖ Galactorrhoea (if non lactational physiological associated with increased prolactin levels
  - ❖ Physiological – clear , serous discharge
  - ❖ Pathological - surgical / not. Malignant or not

**Questions**

- Establish if one or both breasts
- Multiple duct orifices or one
- Contains blood or non bloody
- Spontaneous or provoked
- Recent ammenorrhoea and symptoms of hypogonadism
- Drug hx
- Pathological – Spontaneous, single duct, unilateral, clear serous or bloody

Concerns

BRCA 1 or 2

Age over 50

Previous bx with atypia

# Examination

- Check both breasts, palpate for a mass, identify duct or ducts
- Establish its not other causes for a weeping breast like pagets / eczema

Differentials

- Solitary intraductal papilloma (true polyps/papillary tumour of epithelial lined breast ducts).
- Subareola ductal ectasia
- Epitheliosis
- Infection(periductal mastitis)

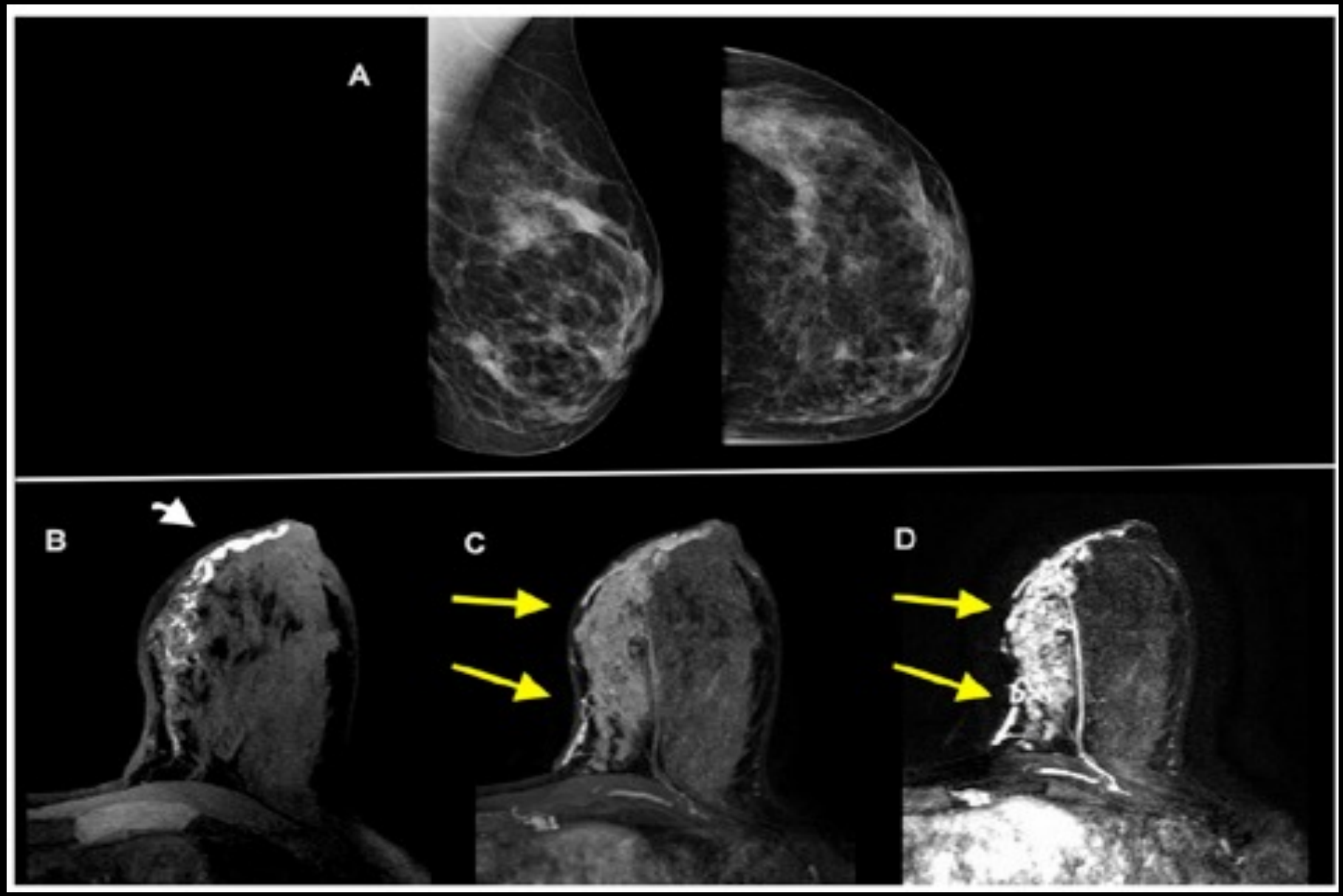
REVIEW ARTICLE

# Nipple discharge: The state of the art

[1]GIOVANNA PANZIRONI, MD, [1]FEDERICA PEDICONI, MD and [2,3]FRANCESCO SARDANELLI, MD

- If Bilateral- Prognostic, prolactin, renal , TFTS + endocrinologist.

| Investigation | Comment | |
|---|---|---|
| Mammography | Low sensitivity and limited accuracy especially for<br>Lesions which are retroareolar or without calcifications. | |
| USS | Improved imaging or retroareolar and duct system compared to mammography | |
| Cytology | False negative over 50%<br>Simple and fast | Not recommended |
| Galactography | Not for contrast allergy<br>Difficult if previous nipple surgery<br>Depends on having discharge at that time.<br>Duct rupture possible<br>Can see lesion but cant differentiate between benign and malignant | Used to be a gold standard but lost relevance |
| Ductoscopy | Visualisation upto max depth possible<br>Not sufficient to make diagnosis of malignancy<br>Technical issues – no discharge, inverted nipple , pain<br>Not readily available despite sensitivity of 94% close to MRI | Good for a negative diagnosis NPV of 98-100% therefore avoiding surgery<br>Can intervene |
| MRI | Non mass enhancement seen vs homogenous enhancement in ductal papilloma<br>Good retroareolar visualization<br>Detects multifocal and multicentric disease or occult contralateral | New indication for PND but costly and not readily available |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PMCID: PMC5394292 | PMID: 28418338

# Diagnosis of Nipple Discharge: Value of Magnetic Resonance Imaging and Ultrasonography in Comparison with Ductoscopy

Ravza Yılmaz,[1,*] Ömer Bender,[2] Fatma Çelik Yabul,[3] Menduh Dursun,[1] Mehtap Tunacı,[1] and Gülden Acunas[1]

## Table 3

**Comparison of results of ultrasonography, magnetic resonance imaging and ductoscopy with histopathology in the diagnosis of intraductal masses**

| | | Pathology | | | | | |
|---|---|---|---|---|---|---|---|
| | | Positive | Negative | Sensivity % | Spesicifity % | PPV % | NPV % |
| Ultrasonography | Positive | 15 | 2 | 75 | 66.7 | 88.2 | 44.4 |
| | Negative | 5 | 4 | | | | |
| MRI | Positive | 18 | 2 | 90 | 66.7 | 90 | 66.7 |
| | Negative | 2 | 4 | | | | |
| Ductoscopy | Positive | 16 | 3 | 94.6 | 40 | 84.2 | 66.7 |
| | Negative | 1 | 2 | | | | |

MRI: magnetic resonance imaging; PPV: positive predictive value; NPV: negative predictive value

# Surgery

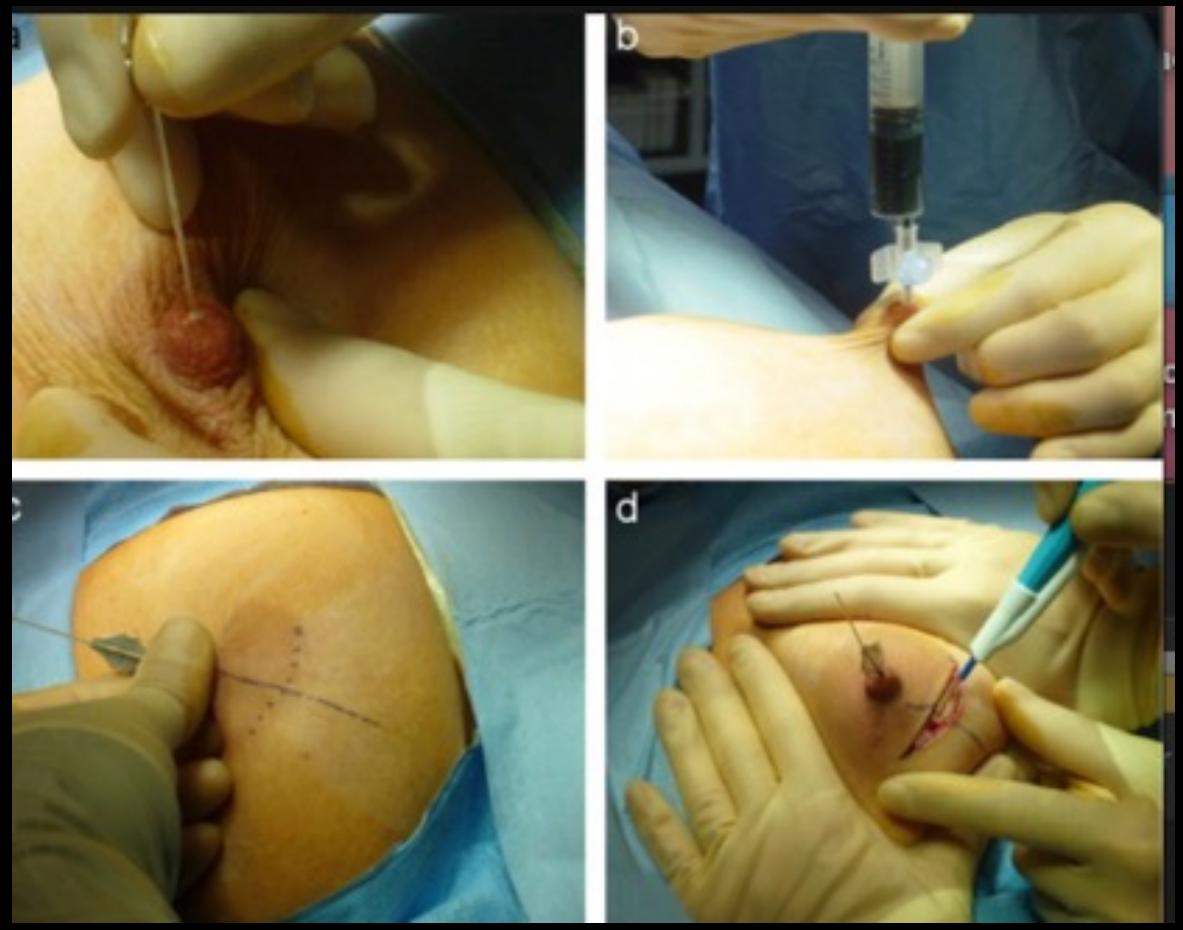
- Rx single duct excise and send for histology Microdochectomy
- Total subareolar duct excision  (major duct excision)

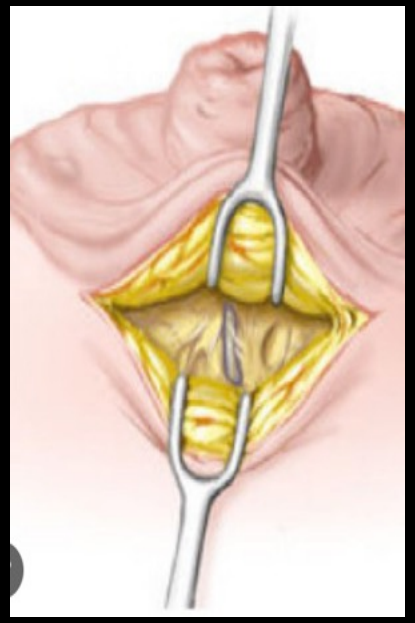
Complications

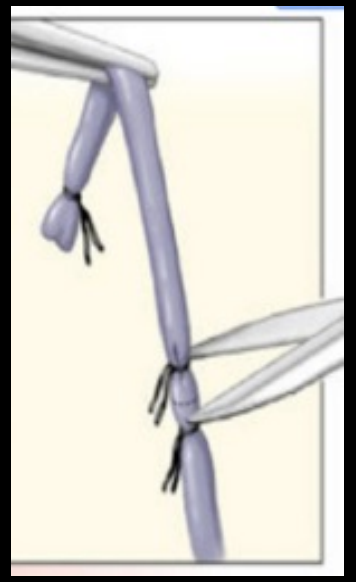
1. Inability to breast feed
2. loss of nipple sensation
3. retroareolar necrosis

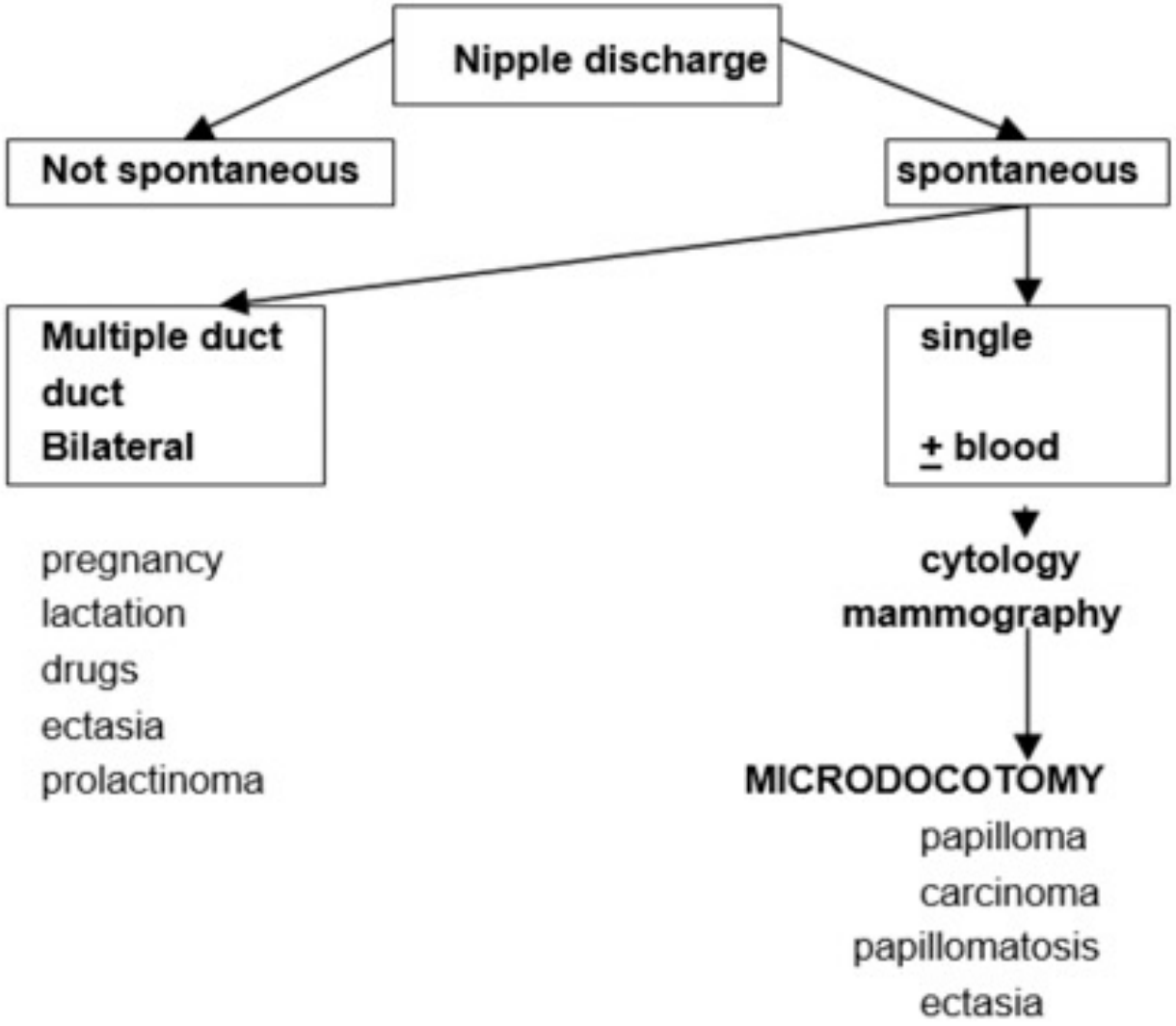
Issue of low and high risk to decide on surveillance then if discharge persistent or recurrent after 2 year can excise for symptomatic relief

# Microductectomy





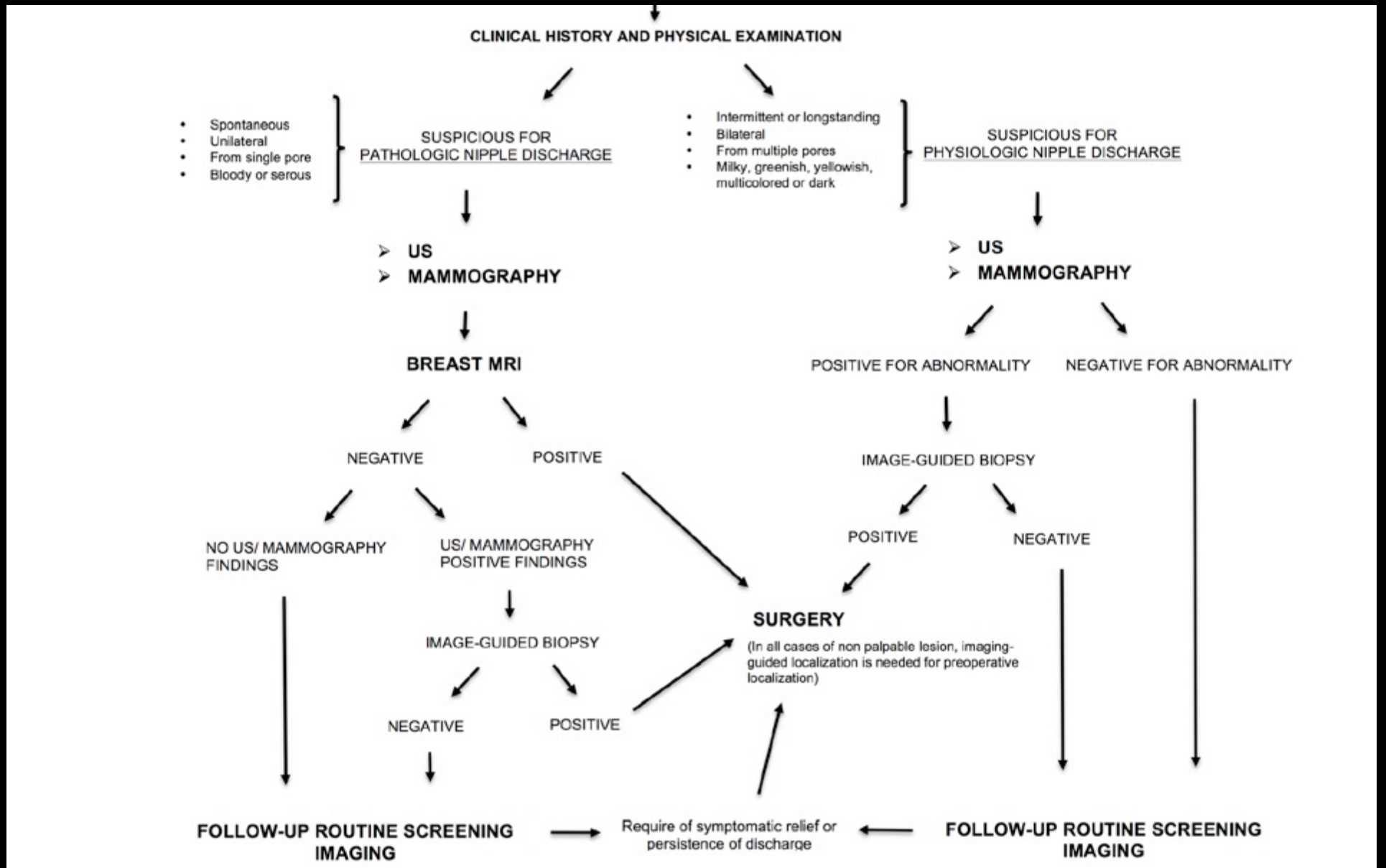



Approach taken at GSH
MRI not routinely done .
Instead of cytology we do
USS and mammography
Prior to microdocotomy.

**OPEN ACCESS TEXTBOOK OF GENERAL SURGERY**

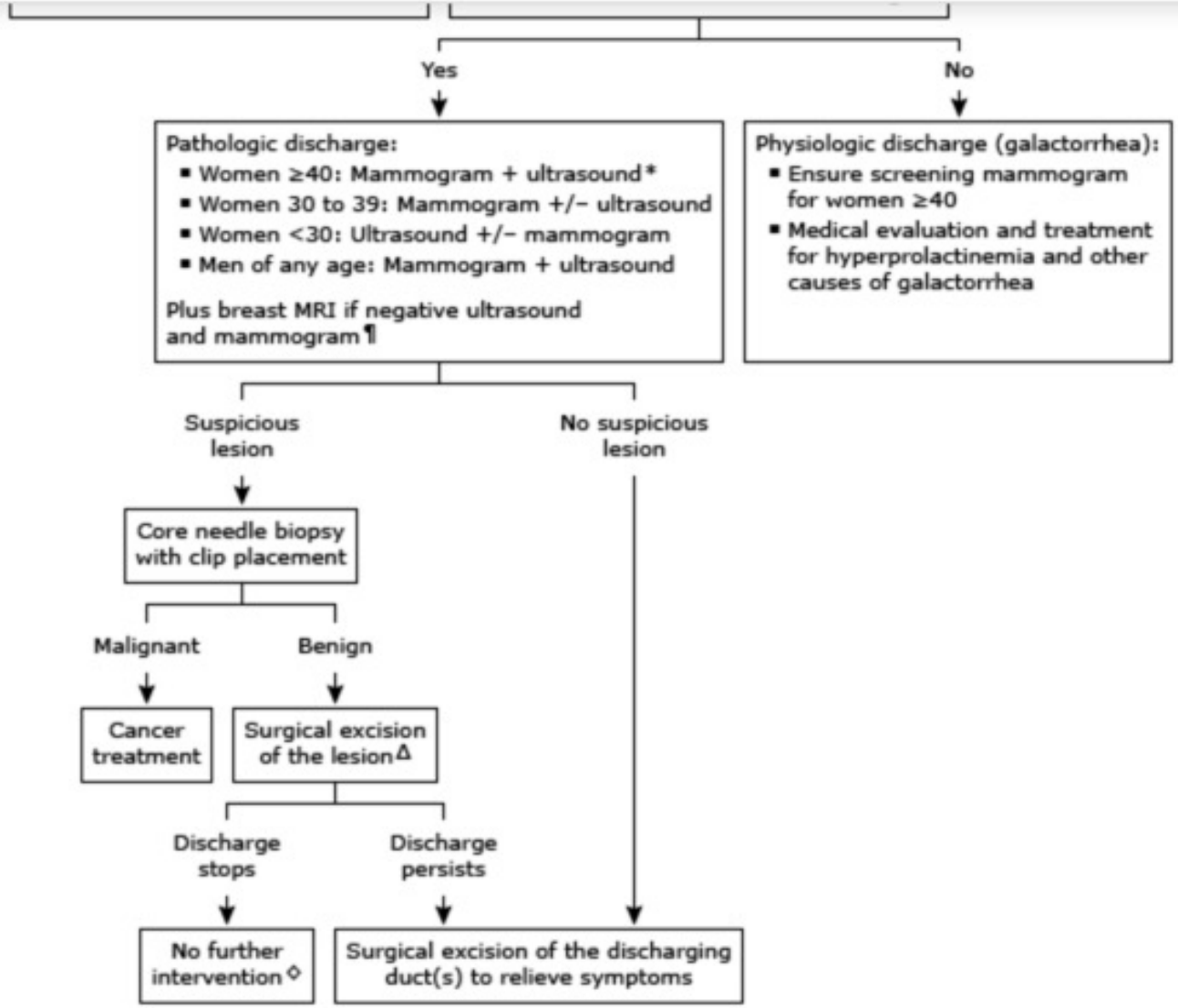
**BENIGN BREAST DISEASE**

**F Malherbe**
**DM Dent**




**Risk of occult cancer is low and mostly high grade DCIS with good prognosis**

# Algorithm for management of spontaneous nipple discharge (nonlactating)



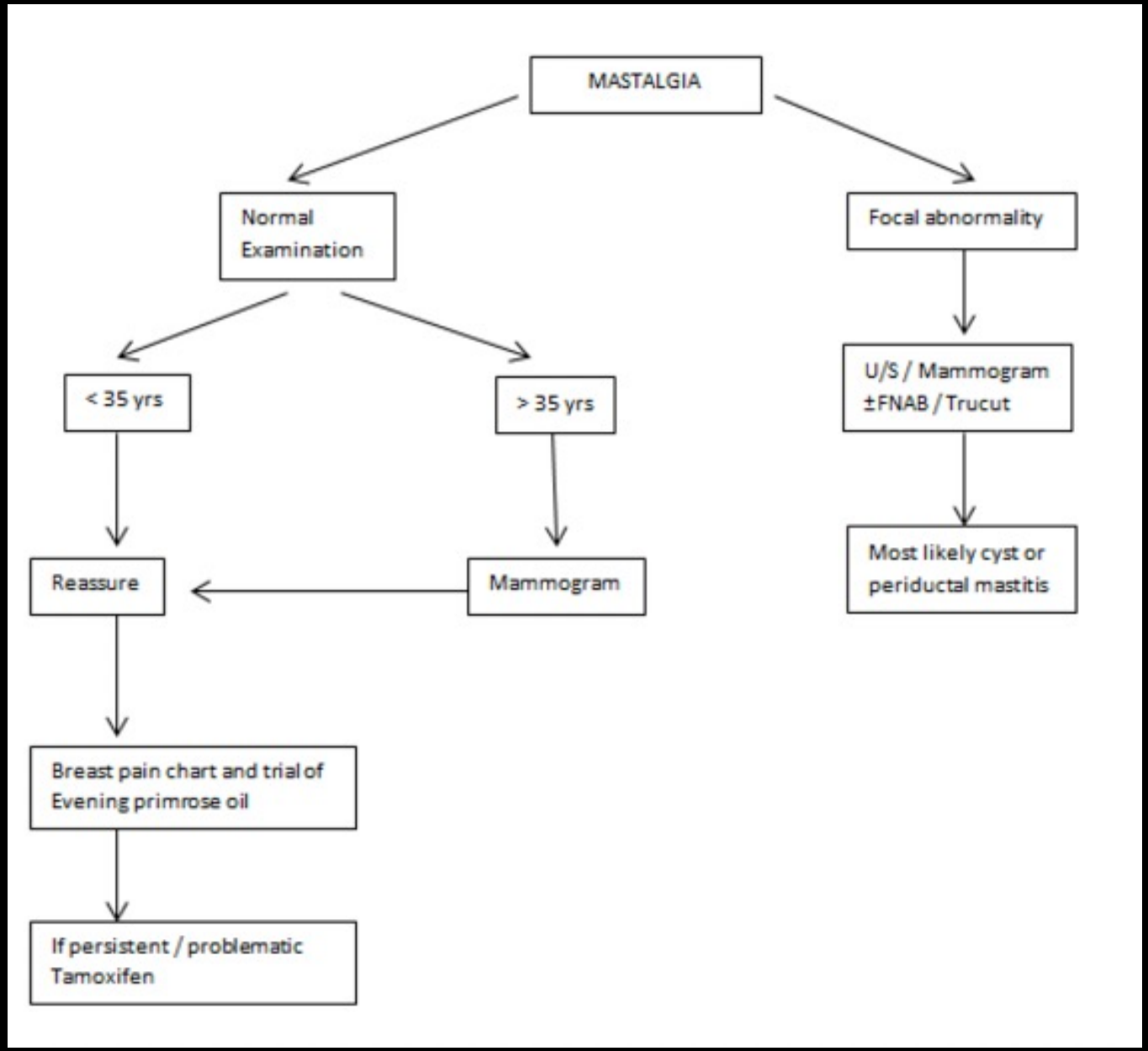
# Mastalgia

Pain

Tenderness

fullness aching

- Pain without any other signs and symptoms is not commonly associated with malignancy (5%)
- Cyclical bilateral / non cyclical / extramammary
- Non cyclical usually unilateral and limited to a particular quadrant
- Extramammary – costochondritis /Tietze syndrome, arthritis , slipping and clicking ribs
- Increase in estrogen and prolactin and decrease in progesterone
- Gynaecomastia especially pubertal




Due to resources we mostly reassure patients with mastalgia and no other abnormality at GSH. Mammography is Not offered for mastalgia.

- Cyclical – reassurance after thorough examination
- Physical support ( well fitting bra and hot/cold compresses)
- Reduce caffeine and fat
- Acetaminophen and NSAIDS ( Oral and  topical)
- A cyst if aspirated can resolve pain
- Antiestrogen for 3 months – danazol or tamoxifen  (prefer latter)
- Selective estrogen receptor drugs – ormeloxifene .
- Primrose oil 3g daily

# Primrose oil

- Omega -6-essential fatty  acids –linoleic acid and gamma-linolenic acid (GLA)
- Women with pain have low levels of GLA and its metabolite.
- Direct effect on immune cells and indirect effect on synthesis of eicosanoids (prostaglandins , cytokines , cytokine mediators which are high in mastalgia
- side effects – GIT upset and headaches

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# A Systematic Review and Meta-Analysis of the Efficacy of Evening Primrose Oil for Mastalgia Treatment

Lina Liana Ahmad Adni, Mohd Noor Norhayati,* Ritzzaleena Rosli Mohd Rosli, and Juliawati Muhammad

Paul B. Tchounwou, Academic Editor

- 13 included studies
- Comparison placebo, topical NSAIDS, danazol or vit e

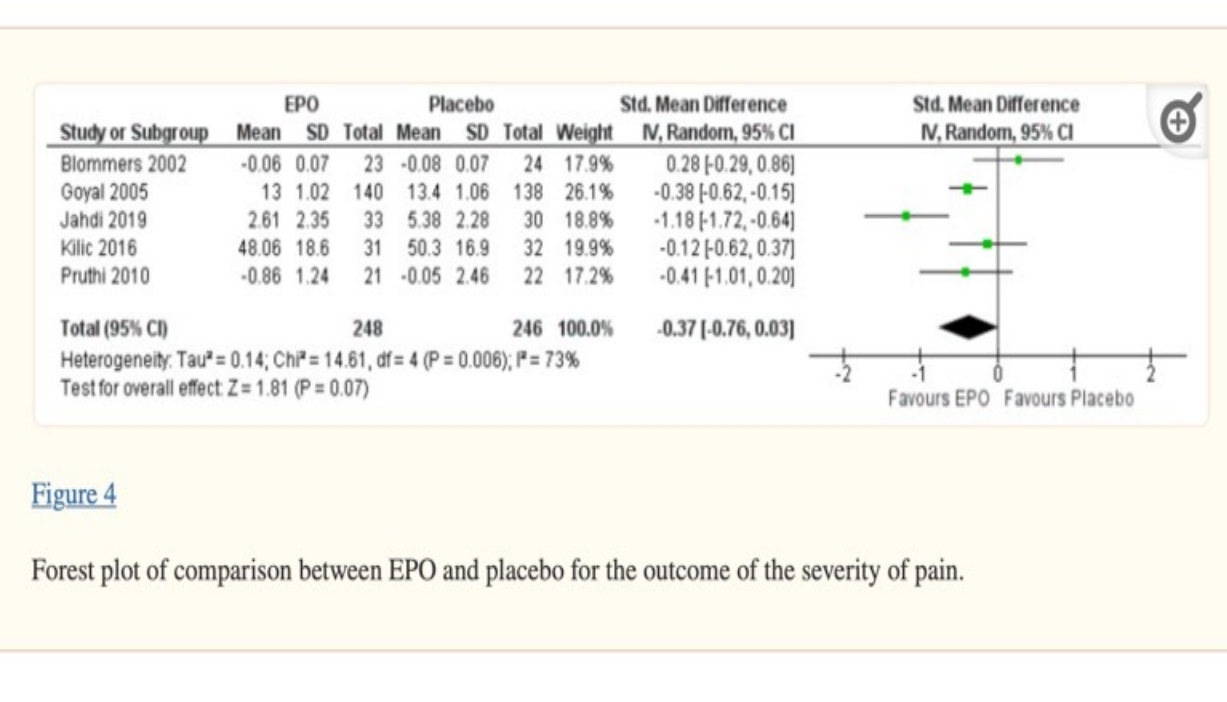


Figure 4

Forest plot of comparison between EPO and placebo for the outcome of the severity of pain.

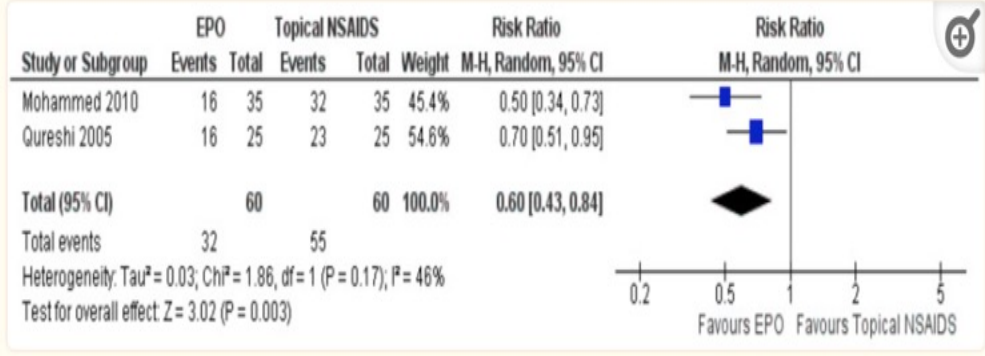


Figure 6

Forest plot of comparison between EPO and topical NSAIDs for the outcome of the number of patients responding to treatment.

No difference in adverse events

No difference with danazol in terms of severity of pain from 3 studies with 232 participants

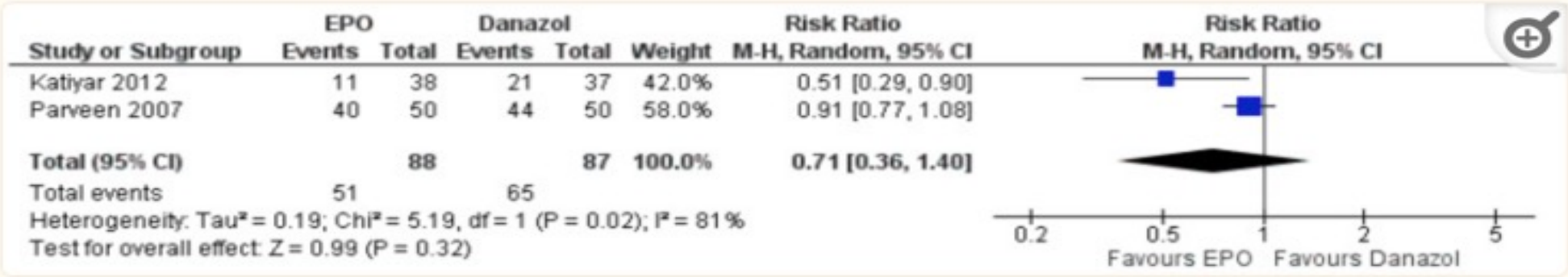


Figure 8

Forest plot of comparison between EPO and Danazol for the outcome of the number of patients responding to treatment.

# CONCLUSIONS

- The participants on EPO showed a better quality of life as compared to the control group; however, this outcome was derived from one trial, thus provides low-quality evidence.
- EPO had no difference compared to the placebo or other treatment in reducing breast pain for women with mastalgia. The EPO does not increase adverse events, such as nausea, abdominal bloating, headache or giddiness, increase weight gain, and altered taste.
- The EPO is a safe medication with similar efficacy for pain control in women with mastalgia.