

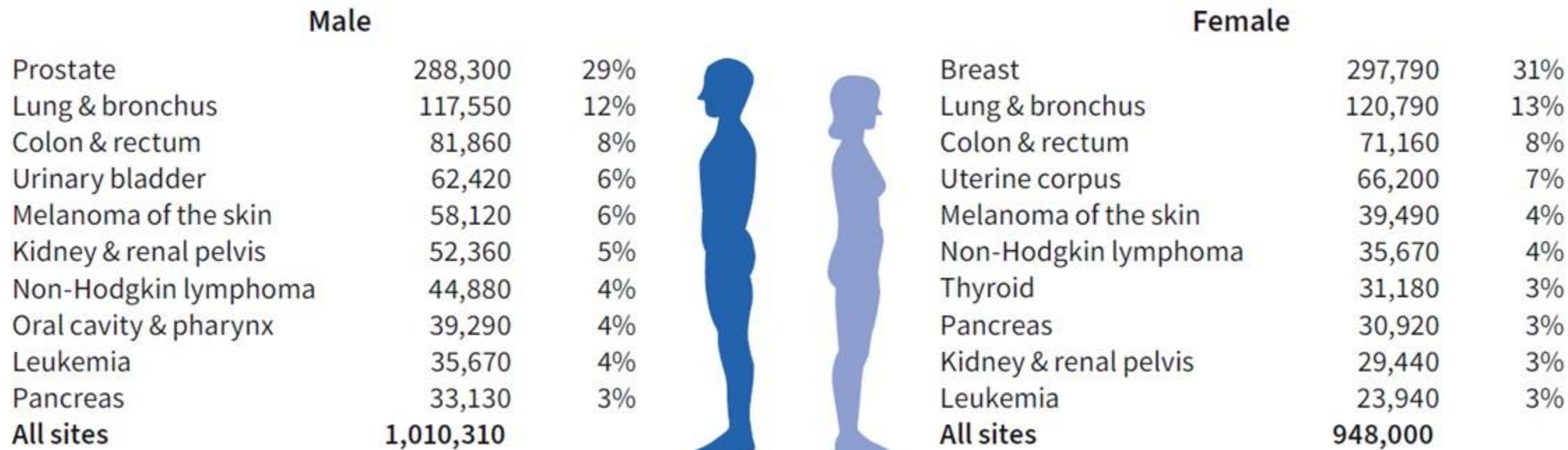


Journal club presentation

PRESENTED

DEPARTMENT OF SURGERY

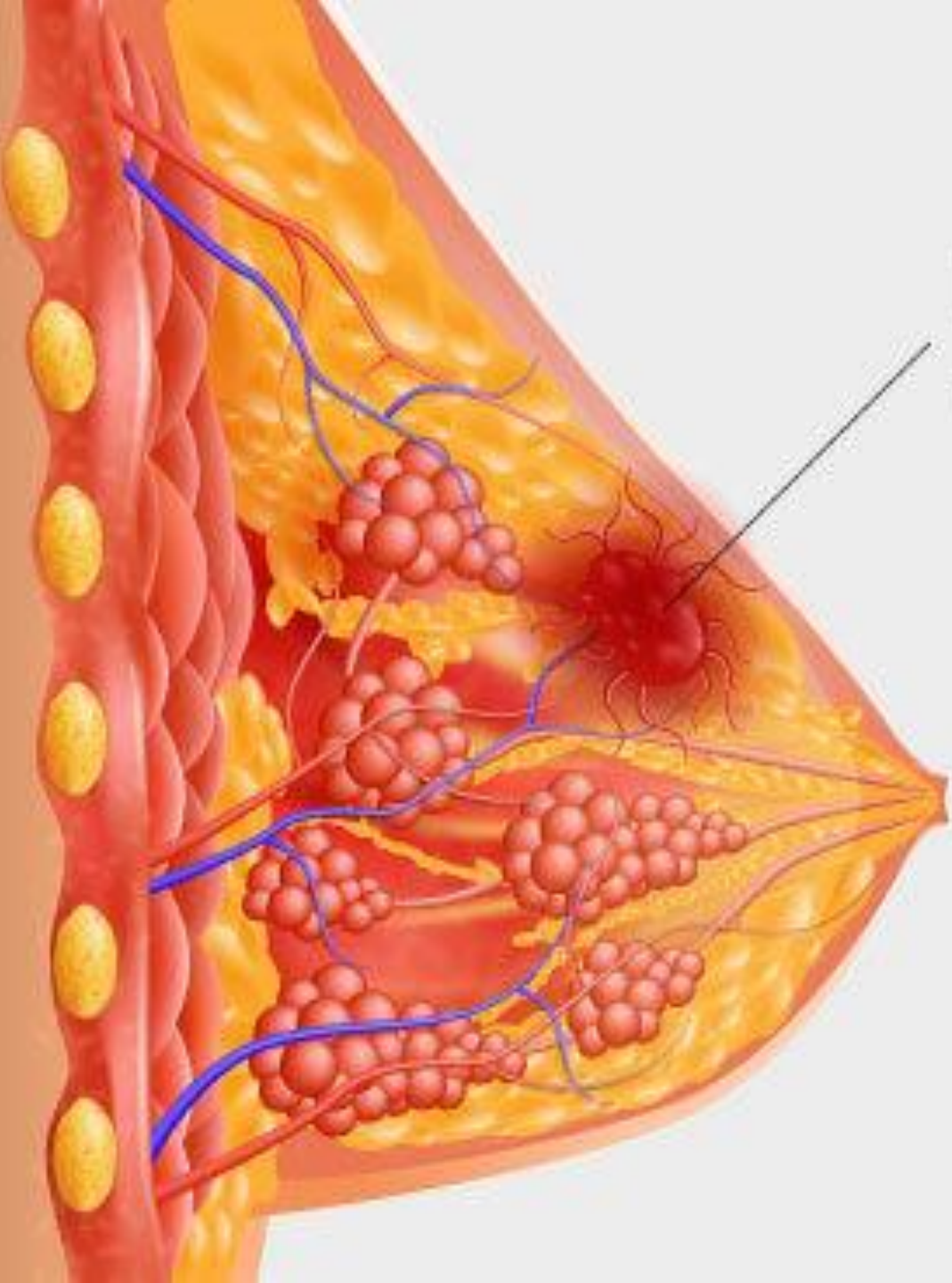
Estimated New Cancer Cases in the US in 2023



- 
- ▶ *One in eight women will develop breast cancer in her lifetime*, according to the National Cancer Institute (NCI)

Bangladesh Scenario

- ▶ More than 13,000 women in Bangladesh are affected with breast cancer and over 7,000 die every year, according to data from the International Agency for Research on Cancer (IARC)
- ▶ In Female Breast cancer ranks the most common cancer (19%).
- ▶ Hospital based cancer registry in NICRH breast cancer is the highest (31.2%) among all female cancer patient.



Malignant
tumor

Surgical Management of **Breast Cancer**

- 
- ▶ **Breast conserving surgery**
 - ▶ **Mastectomy**

Contraindication of BCS

- ▶ **Larger tumor in small breast**
- ▶ **Lack of post surgery radiotherapy facility**
- ▶ **Multicentric tumor**
- ▶ **Recurrence of cancer**
- ▶ **Positive margin**
- ▶ **Patient economic status**
- ▶ **Patient preference**





Dog ear formation after mastectomy closure



Surgical techniques to avoid lateral dog ear of the mastectomy scar: A systematic review

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International Journal of Surgery

Volume 26, February 2016, Pages 73-78



ELSEVIER

19:50 Wed, 13 Mar 16%

Eliminating the dog-ear in modified radical mastect...
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The American Journal of Surgery
Volume 156, Issue 5, November 1988, Pages 401-402

Eliminating the dog-ear in modified radical mastectomy

MD William B. Farrar¹ , MD William J. Fanning¹

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[https://doi.org/10.1016/S0002-9610\(88\)80197-1](https://doi.org/10.1016/S0002-9610(88)80197-1) Get rights and content

Inadequate attention has been paid to optimal closure of the postmastectomy incision in patients not desirous of breast reconstruction. Herein, we describe the use of a basic plastic surgical technique at the time of mastectomy to eliminate the dog-ear deformity at the axillary end of the incision. The technique is conceptually simple and expedient, and gives an excellent cosmetic result.

Recommended articles

FEEDBACK

19:53 Wed, 13 Mar 15%

International Seminars in Surgical Oncology

Research Open Access

An oncoplastic technique to reduce the formation of lateral 'dog-ears' after mastectomy

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Abstract
Background: Lateral skin folds or 'dog-ears' are frequent following mastectomy, particularly in patients with large body habitus.
Methods: We describe a method of modifying the mastectomy incision and suturing to eliminate these lateral 'dog-ears'.
Conclusion: This surgical technique, as compared to others described in the literature, is simple, does not require additional incisions and is cosmetically acceptable to the patient.

Background
Cosmetically sub-optimal lateral skin-folds or 'dog-ears' are frequent following mastectomy. Skin closure can be particularly challenging in patients with large body habitus. The resultant lateral 'dog-ears' tend to hang over the top of the brassiere which can be a nuisance. We illustrate an oncoplastic technique used to eliminate lateral 'dog-ears'.

Methods
The pre-operative marking of the mastectomy incision normally involves drawing an ellipse of varying dimensions depending on the size of the breast. Our technique includes extending this ellipse laterally and upwards towards the axilla (Fig 1). This has the added advantage of flattening the lateral bulge that obese patients tend to develop. Following the mastectomy, a point (point x, Fig 1) approximately one third of the way from the lateral apex along the inferior aspect of the incision is sutured to



a point more medially on the superior flap (point y, Fig 1). The lateral part of the incision can then be secured using dermal sutures, eliminating the 'dog-ear' and drawing the scar up into the axilla.

Discussion
Various surgical techniques e.g., fish-shaped incision, tear-drop incision have been described to eliminate 'dog-ear' deformity after mastectomy [1-3]. Our technique is simple and it does not involve additional incisions. The cosmetic outcome is more acceptable to patients, both aesthetically and for bra/prosthesis fitting. The clinical photographs (Fig 2) and (Fig 3) demonstrate this difference.

Conclusion
The technique described can be used in oncoplastic surgery to improve cosmetic outcome.

Page 1 of 3
(page number not for citation purposes)

International Seminars in Surgical Oncology 2007, 4:29 <http://www.issonline.com/content/4/1/29>

1st systematic *review* of the surgical techniques reported for tackling dog ear formation

Geok Hoon Lim, Hui Fuan Tan. ***Surgical techniques to avoid lateral dog ear of the mastectomy scar: A systematic review.*** Department of Breast Surgery, KK Women's and Children's Hospital, 100 Bukit Timah Road, 229899, Singapore. [International Journal of Surgery](#) [Volume 26](#), February 2016, Pages 73-78.

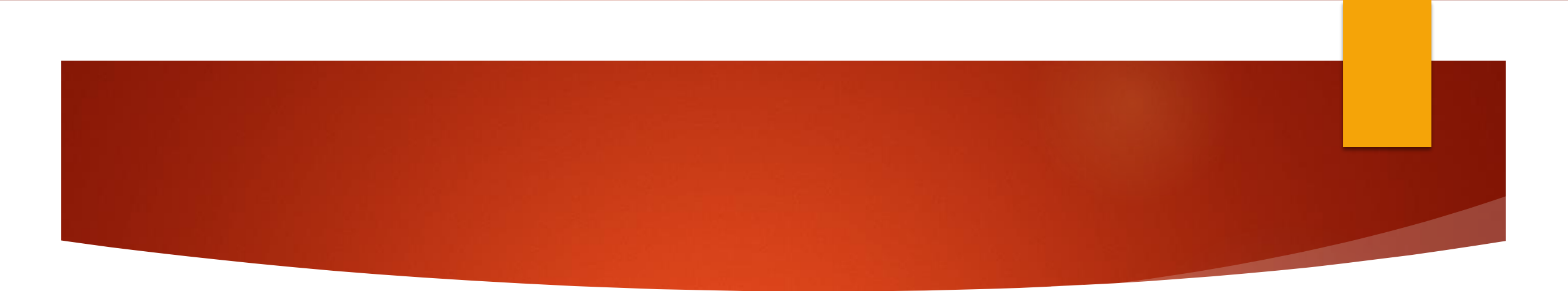
Methods of closure technique

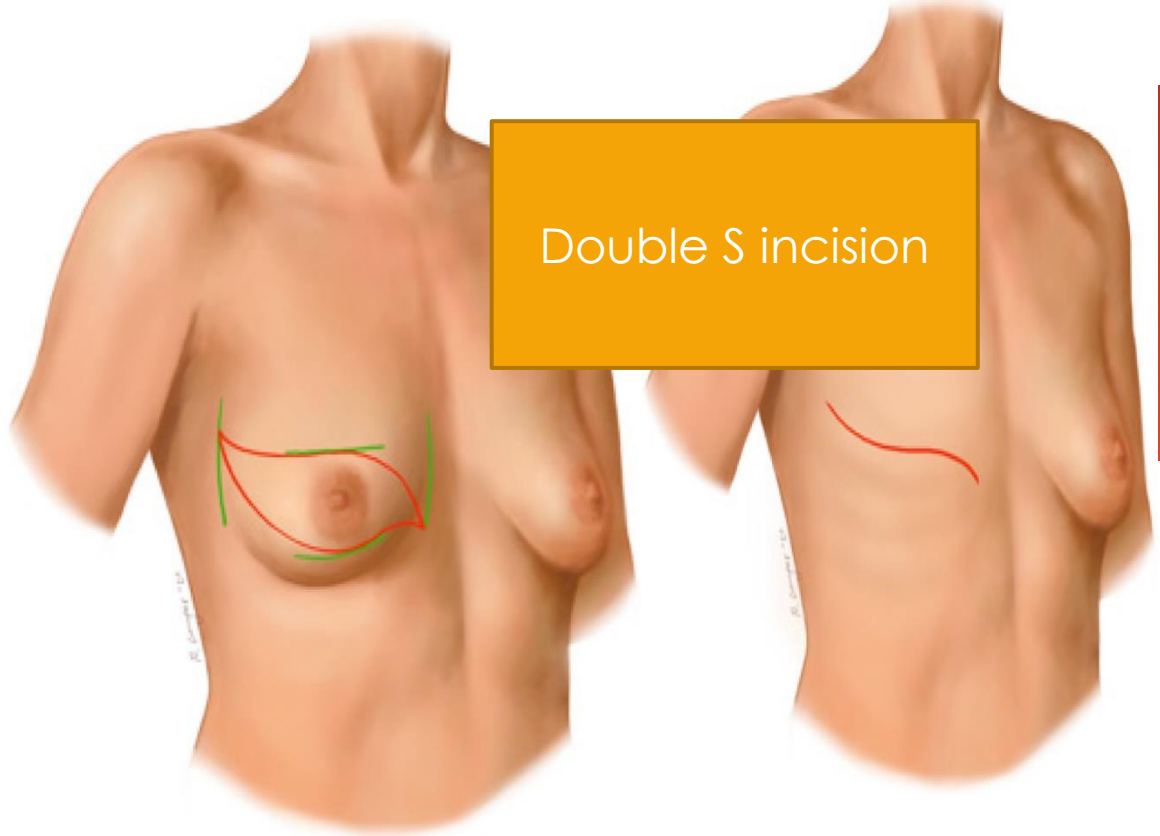
- ▶ **Double S incision**
- ▶ **Tear drop incision**
- ▶ **L-incision**
- ▶ **Liposuction**
- ▶ **FISH technique**
- ▶ **Y-closure commonly described method**

INTRODUCTION

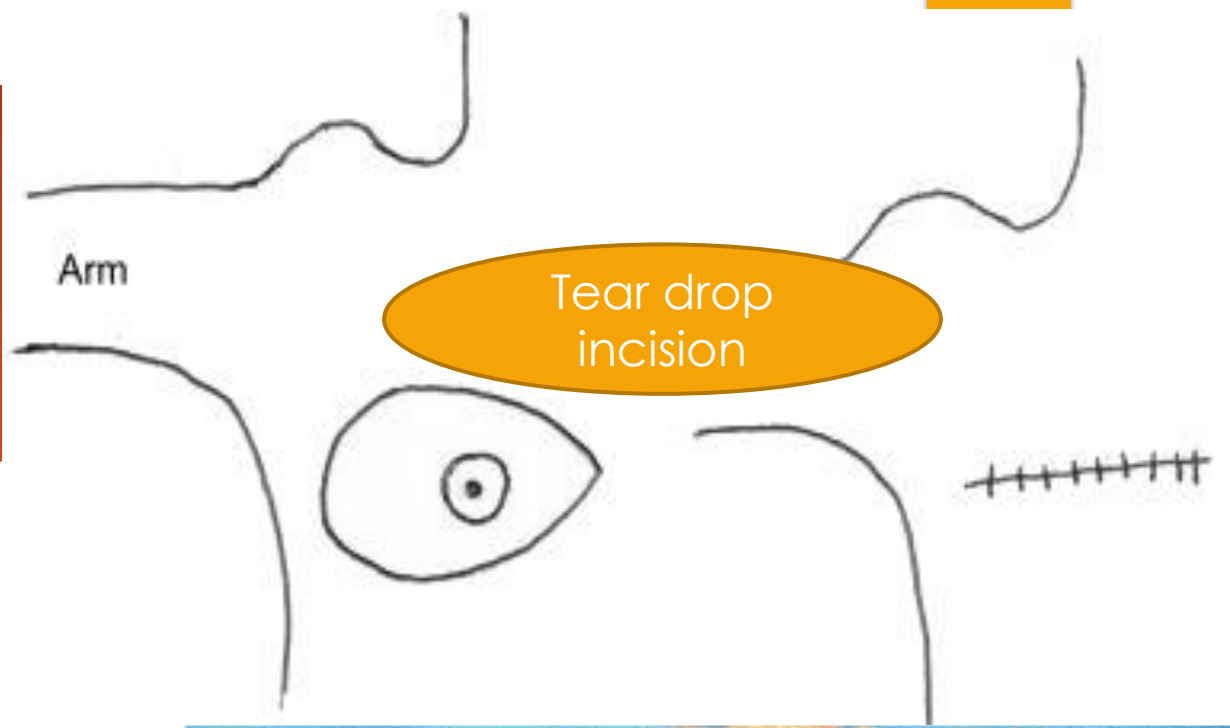
- ▶ Breast cancer is the commonest female cancer worldwide with an estimated 1.67 million new cases being diagnosed worldwide.
- ▶ A modified radical mastectomy is a commonly performed surgical procedure worldwide for breast cancer.
- ▶ However if the mastectomy incision is not planned properly, it can result in a dog ear laterally .
- ▶ This is not only cosmetically unpleasing but can also be a source of discomfort to the patients, interfering with arm movement and the fitting of the brassiere.



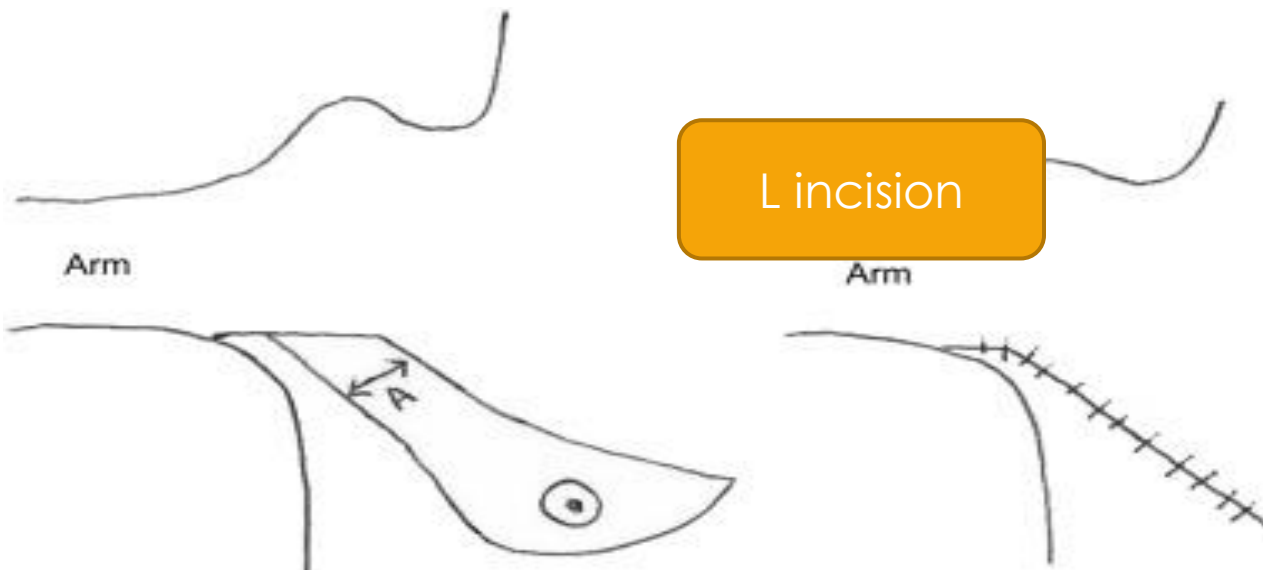
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- ▶ This lateral mastectomy dog ear formation is seen more frequently in the overweight or obese women
 - ▶ Several surgical techniques have been published to avoid or tackle dog ear in the lateral aspect of the mastectomy scar but there is no standardized technique.



Double S incision



Tear drop incision



L incision



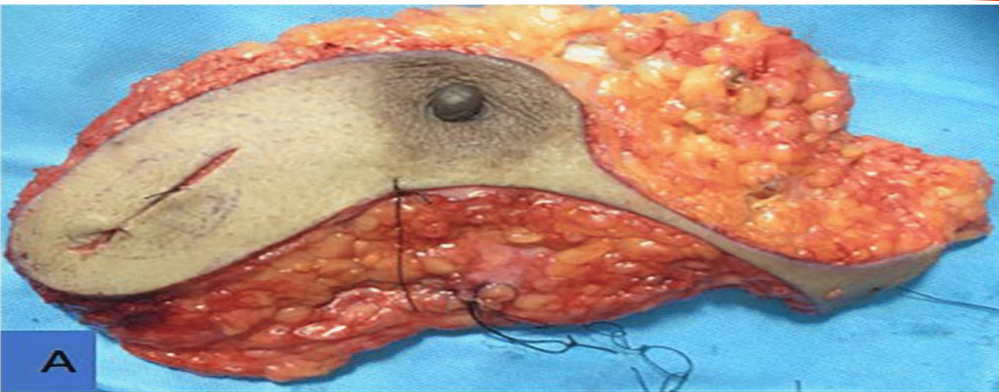
FISH incision



Liposuction

- ▶ The advantage of liposuction is that it is minimally invasive with well concealed scars.
- ▶ However, it may require multiple attempts and may at times necessitate being combined with an excision of excess skin and a lipectomy to achieve an optimal outcome.

► Fish-shaped' incision or Y closure is the commonest described technique that has been assessed to be safe.



A



B

FISH incision



A

B

Y-shaped
clouser

Materials and methods

- ▶ A systematic literature search was conducted on the EMBASE, MEDLINE, Cochrane library and Pubmed databases on 1st June 2015 using the search terms 'mastectomy dog ear', 'mastectomy lateral fold', 'mastectomy scar' and 'mastectomy cosmesis' by two reviewers independently.
- ▶ The data is then analysed in a descriptive manner in accordance with the best practice as described by the Preferred Reporting Items for Systematic Reviews and Meta- Analyses (PRISMA) statement .

Results

- ▶ The search returned 2503 potentially relevant articles but only 12 articles met the inclusion criteria with 2491 being excluded.

Identification

Database search for potentially relevant studies
(n = 2503)

Screening

Abstracts for Initial screen after de-duplication
(n = 1788)

Eligibility

Full-text manuscripts evaluated for eligibility
(n = 21)

Reasons for exclusion (n = 1767)

- Not in English (171)
- Not referring to human subjects (11)
- Unrelated to mastectomy dog ear scars (1585)

Included

Studies for inclusion (n= 12)

- 'Fish-shaped' incision or Y closure (6)
- Other techniques (6)

Reasons for exclusion (n = 9)

- Video, conference abstracts, etc. (2)
- Not published in English (1)
- Preoperative prevention without a described surgical technique (1)
- Unrelated to mastectomy dog ear scars (5)

DISCUSSION



Author	Year	Technique	Merits	Limitations	Tips of the technique
Farrar WB ³	1988	Y closure	-*Good exposure to axilla, safe and easy to perform	-**Additional limb scar, skin necrosis at apex of Y incision	- ***Apex of the Y closure or 'fish-shaped' incision is placed at or lateral to the anterior axillary line to conceal the limb scar under the arm - To keep a broad base between the two Y limbs to avoid skin necrosis of the apex of the Y closure
#Nowacki MP ⁵	1988	'Fish-shaped' incision	refer to *	refer to **	refer to ***
#Nowacki MP ¹³	1991	'Fish-shaped' incision	refer to *	refer to **	refer to ***
#Gibbs ER ¹⁴	1998	Modified V-Y advancement	refer to *	refer to **	refer to ***



Mirza M ¹¹	2003	Tear-drop incision	<ul style="list-style-type: none"> - Linear scar without additional limb scar - Good exposure to axilla 	<ul style="list-style-type: none"> - Results variable as it is dependent on the point of closure of the lateral apex of the incision 	<ul style="list-style-type: none"> - To include the axillary fat pad in the broader part of the incision
#Hussien M ⁹	2004	Fish-tail Plasty	refer to *	refer to **	refer to ***
Choi JY ⁸	2006	Liposuction	<ul style="list-style-type: none"> - Minimally invasive 	<ul style="list-style-type: none"> - May require multiple attempts - May still require excision of skin and lipectomy 	<ul style="list-style-type: none"> - To place the scars in areas where it can be well-concealed and yet achieve good access
Devalia H ¹⁵	2007	Oncoplastic technique	<ul style="list-style-type: none"> - Simple - Avoids additional limb scar 	<ul style="list-style-type: none"> - May result in lateral superior wound puckering 	<ul style="list-style-type: none"> - To oppose lateral superior 1/2 to lateral inferior 1/3 flap
#Szynglarewicz B ¹⁰	2009	Y-shaped incision	refer to *	refer to **	refer to ***
Bennett IC ¹⁶	2011	Triangular advancement technique	<ul style="list-style-type: none"> - No additional limb scar 	<ul style="list-style-type: none"> - Puckering of lateral wound if the wound was not closed properly 	<ul style="list-style-type: none"> - D-shaped incision with excision of a triangular

Clough KB ⁶	2012	'L' scar technique	- Single 'L' scar with the axillary part of scar hidden beneath the arm, good exposure to the axilla and causes minimal skin loss	- Could lead to tension in wound closure with wound complications if too much axillary skin is resected	medially and inferiorly - To keep the distance between the oblique incisions in the axilla less than 3cm
Thomas R ⁷	2012	Waisted teardrop and de-epithelisation of lateral flap	- Single scar without additional limb scar	- Closure of de-epithelised skin can result in wound puckering	- To retract the lateral end of the incision medially and mark a rhomboid shaped area of skin to be de-epithelised

These techniques are a variation of the 'fish-shaped' incision or Y closure, hence they also share the same merits, limitations and tips as outlined in the Farrar WB et al.[3] reference.

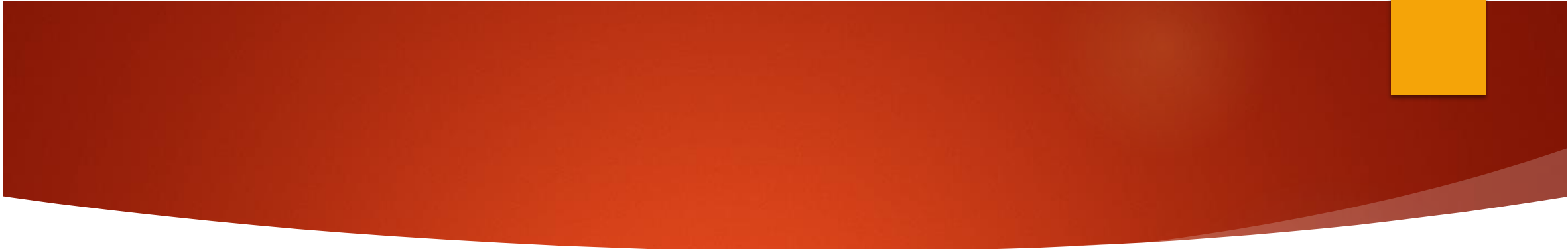


The 'fish-shaped' incision or y closure and its variations were the most commonly described techniques in 6 studies.

- 
- ▶ Of these studies, there were a total of 160 patients with 8 reported cases of complication.

The complications include

- ▶ skin necrosis occurring in 4 patients,
- ▶ infection in 3 patients and
- ▶ wound haematoma in 1 patient.
- ▶ All these complications were treated successfully. Cosmesis outcome was assessed in these patients and was reported to be good except in a patient who developed skin necrosis at the apex of the axillary triangle.

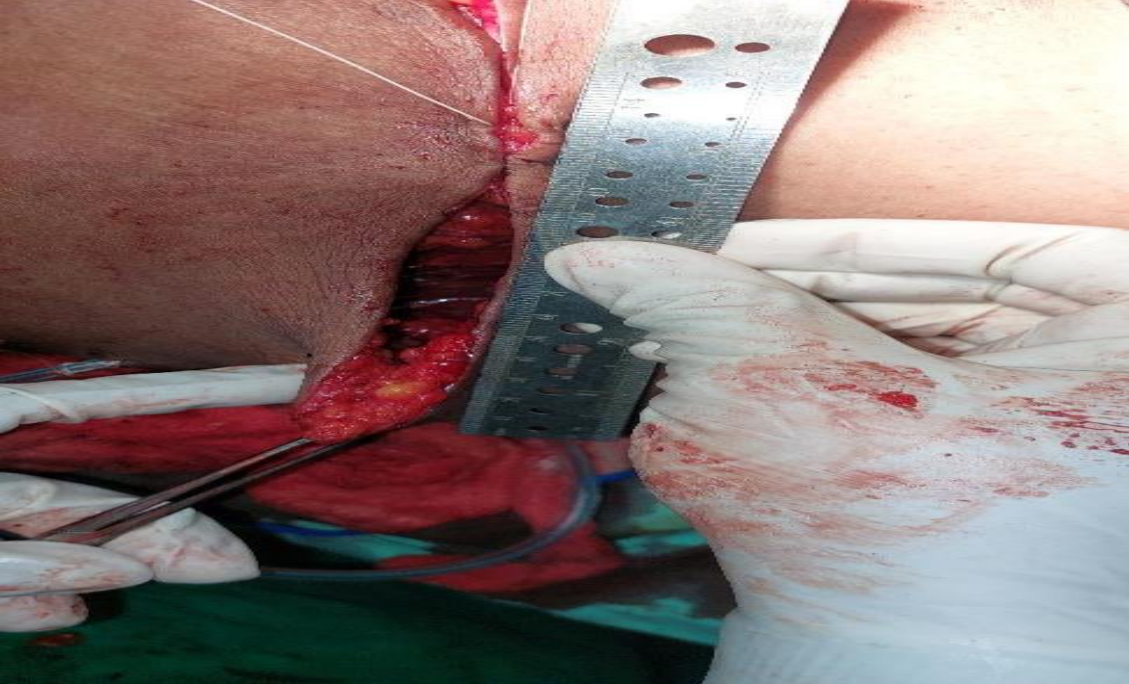
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- ▶ In fact, two of these studies were prospective studies with 28 and 117 patients respectively, which concluded the 'fish-shaped' incision or y closure to be safe and could improve cosmesis.

My study

Y-shaped closure of mastectomy wound: a safe technique to improve cosmesis at the lateral end of mastectomy scars

Method

- ▶ Study period: Between January 2021 to June 2023 those were undergone modified radical mastectomy by Stewart incision
- ▶ Sample size: 51 cases y closure
- ▶ 118 cases traditional closure
- ▶ Type of study: prospective
- ▶ Study place: Ad-din medical college hospital and private practice



Post operative complication

- ▶ 1) Necrosis at the tripoint or apex-9 cases
- ▶ 2) marginal flap necrosis-3 cases
- ▶ 3) Wound seroma-4 cases
- ▶ 4) Wound haematoma-3 cases
- ▶ In traditional closure 52 cases developed dog ear

Merits

- ▶ Easy to close without undue tension
- ▶ Cosmetically superior
- ▶ No hindrance to movement of ipsilateral arm
- ▶ Brassiere fits without any discomfort
- ▶ Avoids seroma formation in the lateral pocket of the dog ear
- ▶ Avoids lateral shift of scar thus reducing the volume to be irradiated



The demerits of Y-shaped incision creates a **tri point** at risk for necrosis can be prevented by maintaining a broad base between the two Y limbs.

- ▶ The disadvantage of the y closure was an additional limb scar apart from the linear scar.



Marginal flap necrosis with necrosis at apex

No dog ear, Healed without complication



Conclusion

- ▶ Various surgical techniques to tackle lateral dog ear formation of the mastectomy scar are available with individual merits and limitations.
- ▶ . It is crucial that the breast surgeon is familiar with the various techniques so that the patient can receive individualized surgical management.



April 5-6-7, 2024
At: Sir HN Reliance Foundation Hospital





Hope

Thank
you