

Clinicopathological spectrum of vulvar lesions: An 11-year audit of 634 consecutive cases from a tertiary care centre in India

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INTRODUCTION

- Vulvar pathology encompasses a heterogeneous group of lesions ranging from benign dermatoses to invasive malignancies
- Account for 4-5% of all gynecological cancers
- Data on the clinicopathological spectrum of vulvar diseases from large institutional series in India remains limited

AIM OF THE STUDY

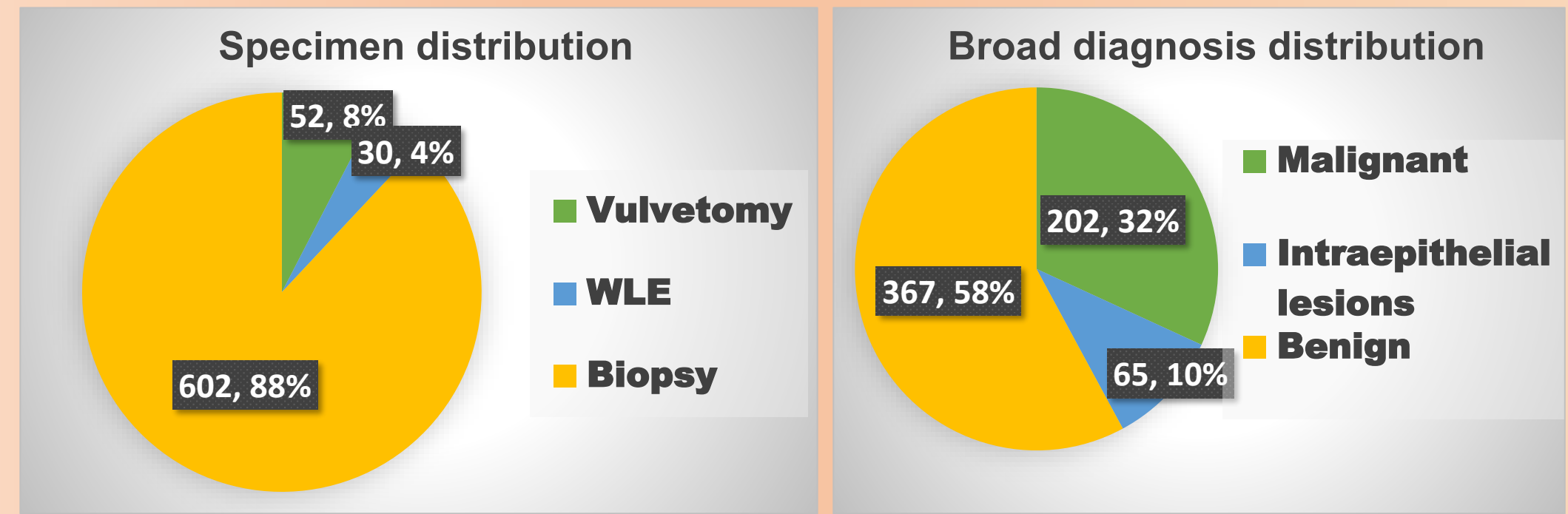
- The study aimed to evaluate the spectrum of vulvar lesions in our tertiary care centre over 11 years

METHODOLOGY

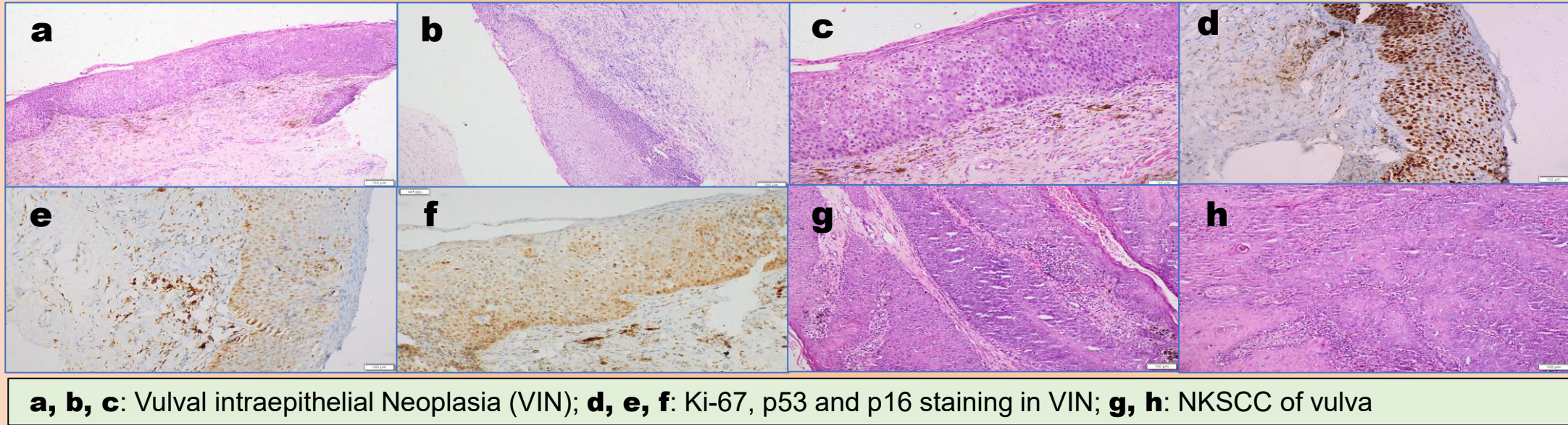
- Ambispective study, ranged from 2014 to 2025
- Clinicopathological parameters including demographics, histopathology and ancillary studies (IHC) were induced and analysed

RESULTS

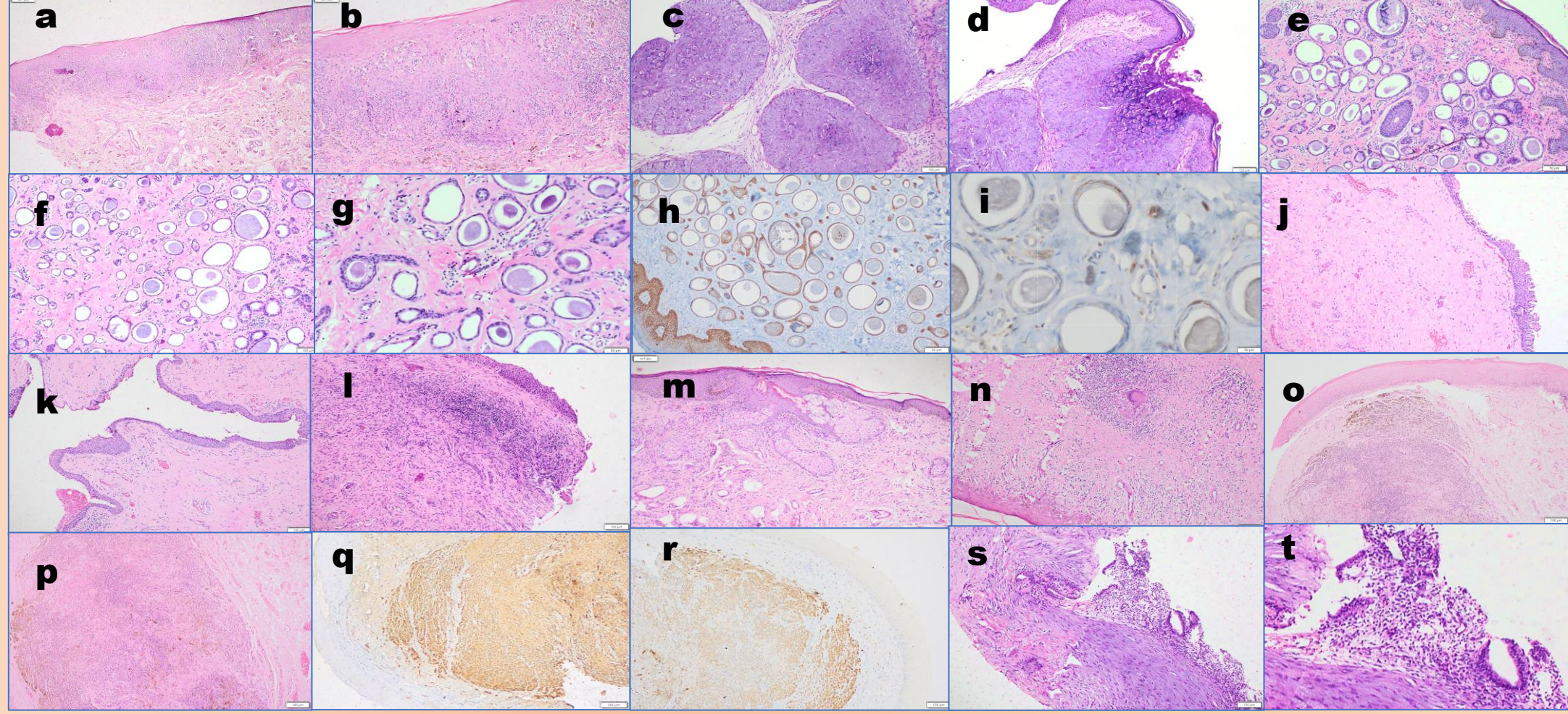
- Total **634** patients inducted in the study
- 14** cases were pediatric (**2.20%**) and **620** cases were adults (**97.7%**)
- Mean age was **52 years** and median age was **53 years**



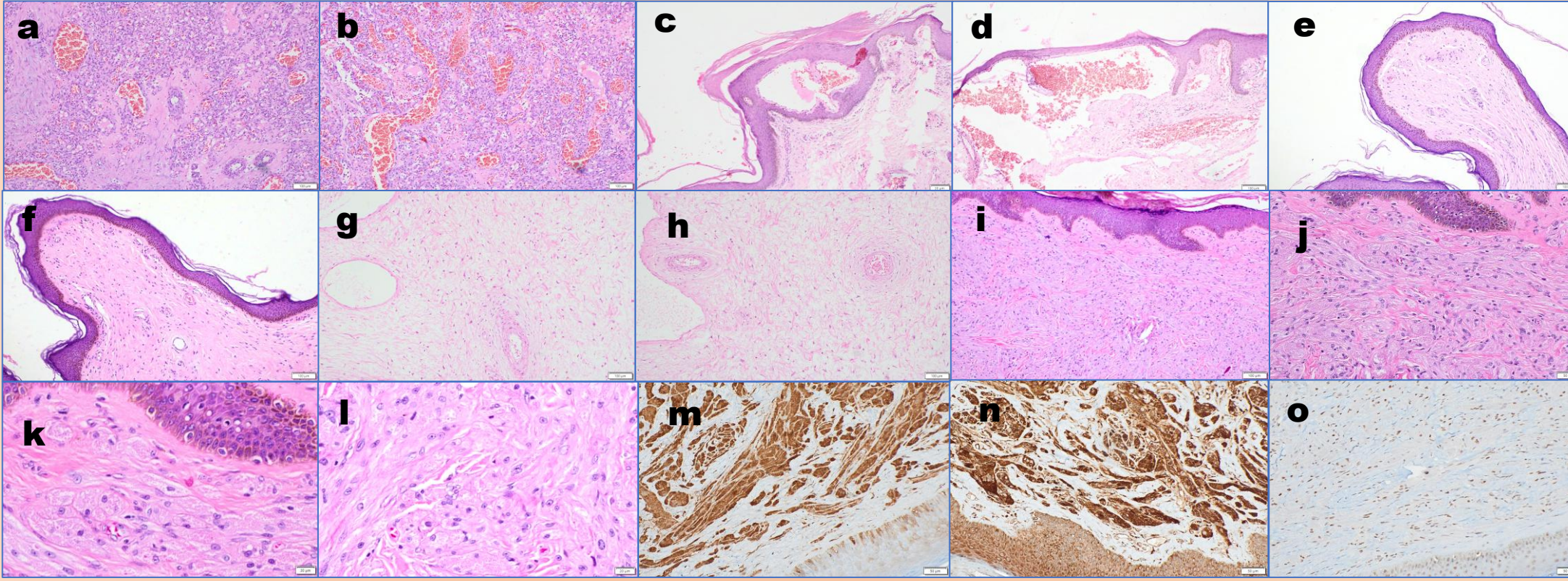
- Of carcinoma cases, 145 were KSCCs, 22 were NKSCCs, 3 poorly differentiated, 1 adenosquamous and 1 adenoid cystic carcinoma
- VINs (VIN2 and VIN3) were the predominant intraepithelial neoplasms (**75.38%**)



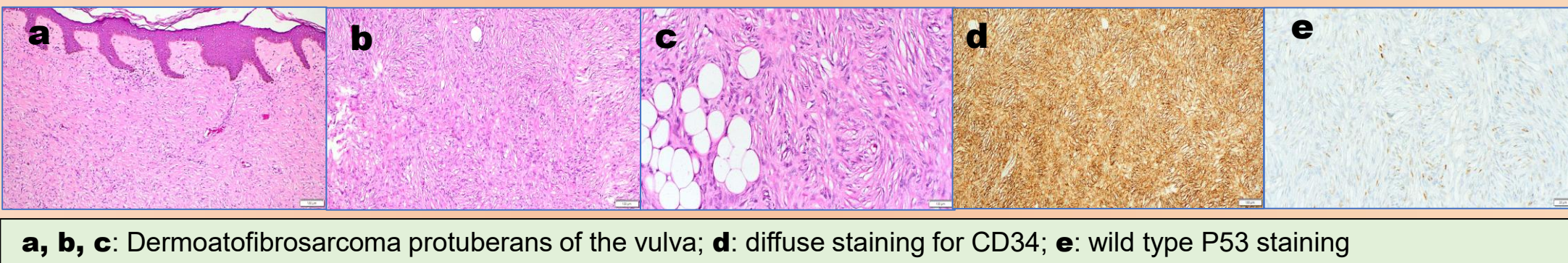
- Of the **367** benign diagnoses, **33.24%** were benign dermatoses
- Lichen sclerosis (12.30%)** was the prevailing benign skin lesion
- Bartholins cyst and epidermal inclusion cyst were the most common cystic lesions



- Mesenchymal neoplasms constituted **8.35%** of cases
- Benign fibroepithelial polyp followed by angiomyxoma were the most frequent benign mesenchymal neoplasms



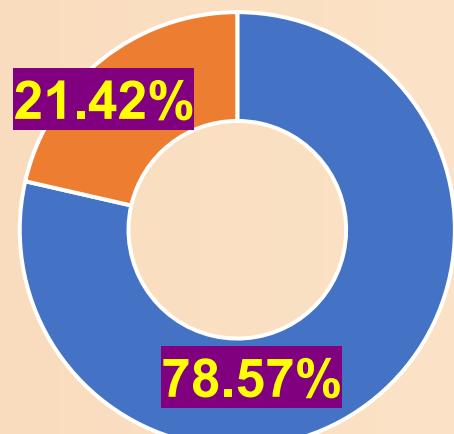
- Malignant mesenchymal neoplasms included wide range of diagnoses
- The most common pediatric diagnosis was rhabdomyosarcoma (**28.57%**)



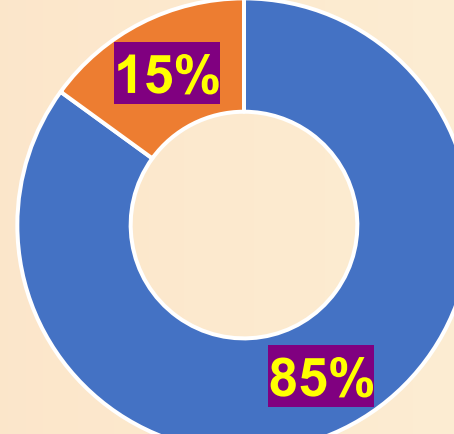
- Amongst recurrent cases, SCC was the most predominant (**69%**)
- Carcinoma cervix was the most frequent associated pathology

Benign dermatoses	n	Percentage	Mesenchymal neoplasms	n	Percentage
Lichen sclerosis	78	12.30%	Malignant		
Lichenoid tissue reaction	13	10.65%	Rhabdomyosarcoma	5	9.43%
Lichen planus	6	4.91%	Lymphangiosarcoma	2	3.77%
Lichen simplex chronicus	3	2.46%	Leiomyosarcoma	1	1.88%
Hidradenoma papilliferum	5	4.09%	Low grade fibrosarcoma	1	1.88%
Squamous papilloma	2	1.63%	Epithelioid sarcoma	1	1.88%
Verruciform xanthoma	1	0.81%	Myxoid liposarcoma	1	1.88%
Giant congenital nevus	1	0.81%	Dermatofibrosarcoma protuberans (DFSP)	1	1.88%
Dermal nevus	1	0.81%	Undifferentiated spindle cell sarcoma	1	1.88%
Spongiotic dermatitis	1	0.81%	Benign		
Interphase dermatitis	2	1.63%	Angiomyxoma	6	11.32%
Chronic dermatitis	1	0.81%	Angiokeratoma	4	7.54%
Vitiligo	1	0.81%	Hemangioma	3	5.66%
Molluscum contagiosum	1	0.81%	Lymphangioma circumscriptum	2	3.77%
Vulval hyperkeratosis	1	0.81%	Lymphangiectasia	1	1.88%
Syringoma	1	0.81%	Granular cell tumor	1	1.88%
Leukoplakia without dysplasia	4	3.27%	Venous malformation	2	3.77%
			Benign fibroepithelial polyp	18	33.96%
			Solitary fibrous tumor (SFT)	1	1.88%
			Leiomyoma	1	1.88%
			Angiofibroma	1	1.88%

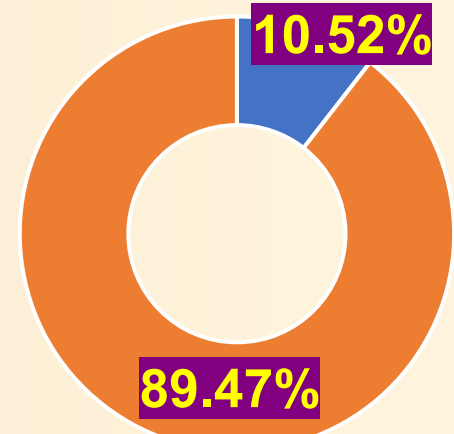
- P16 ancillary testing was performed in **72 cases**
- 85% of VINs, 75.8% of NKSCCs and only 10.5% of KSCCs showed p16 block positivity



■ NKSCC p16 positive
■ NKSCC p16 negative



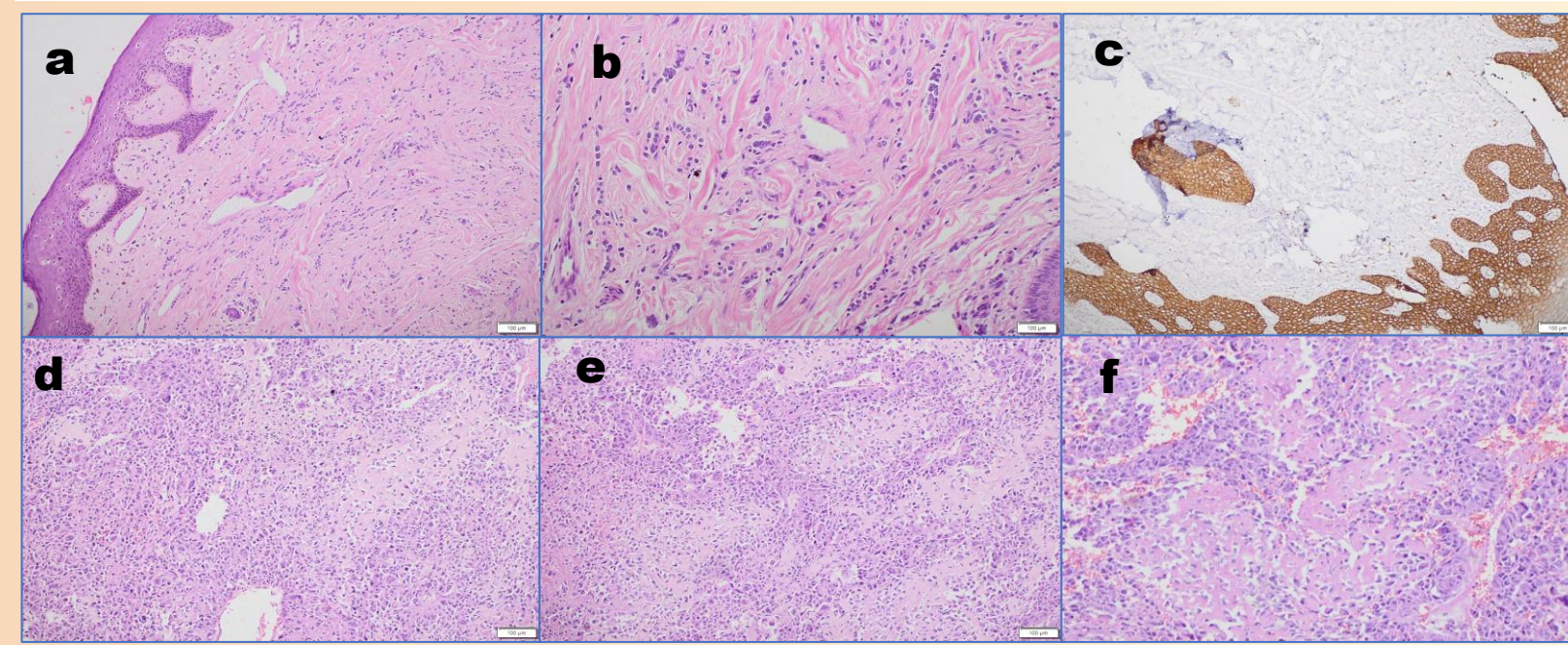
■ VIN p16 positive
■ VIN p16 negative



■ KSCC p16 positive
■ KSCC p16 negative

- Metastatic cases comprised of minor fraction of vulvar tumors (**7 cases, 1.10%**)

Metastatic tumors	n	Percentage
Met. Lobular breast carcinoma	2	28.57%
Met. Phyllodes tumor with osteosarcomatous differentiation	1	14.28%
Met. Squamous cell carcinoma	1	14.28%
Met. Serous carcinoma of endometrium	1	14.28%
Met. Adenocarcinoma (rectum primary)	1	14.28%
Met. Adenocarcinoma (possible GI/Pancreatobiliary primary)	1	14.28%



- Lymph node dissection was done in 82 cases, out of which metastases were seen in 34 cases (41.46% of all LN dissections)
- SCCs** comprised of majority of LN metastases (88.23%)

2014, SCC (40%)

2025, VIN (14.81%)

2015, VIN (3.84%)

2025, SCC (25.92%)

Decline in upfront SCC diagnoses with rising VIN suggests improved early detection and evolving disease spectrum

CONCLUSION

- This comprehensive institutional analysis highlights the diverse clinicopathological spectrum of vulvar lesions, with benign dermatoses forming a majority of benign cases and SCC being the principal malignancy in vulva
- This audit provides valuable insight into disease patterns and may aid in improving diagnostic and management strategies for vulvar diseases

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