

Table (Supplementary): Benign & malignant lesions according to histopathology.

Type of lesion	Number	%
Benign	19	65.52
Fibrocystic disease	6	31.58
Fibroadenomatoid changes	4	21.05
Adenosis	3	15.79
Diabetic mastopathy	2	10.53
Duct ectasia	2	10.53
papilloma	1	5.26
Complicated Cyst	1	5.26
Malignant	10	34.48
IDC	4	40
DCIS	2	20
Adenoid cystic carcinoma	1	10
Metastatic breast cancer	1	10
Inflammatory carcinoma	2	20
Total	29	100%

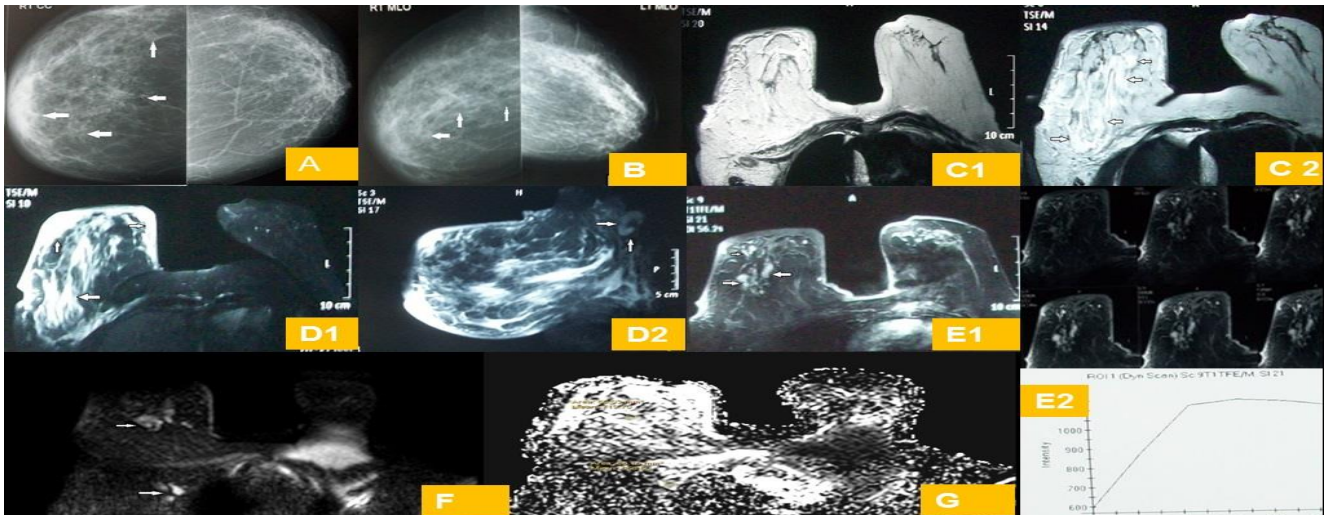


Fig. (2): a 55 years old female patient presented with Rt. Breast redness, swelling & mastalgia. (A) & (B) mammographic CC & MLO views respectively show Rt. retroareolar and upper outer quadrant increased breast density denoting global asymmetry (Arrows), associated with mild skin thickening.(C1&C2) Axial T2 WI & (D1) axial T2 SPAIR show Rt. breast diffuse hyperintense SI extending to the right chest wall with skin thickening denoting interstitial edema (Arrows) (D2) Sagittal T2 SPAIR shows Rt. axillary enlarged lymph node with thick cortex (Arrows)(E1) Axial T1 post contrast with fat suppression shows Rt. upper outer area (arrows) of clumped non- mass like enhancement. (E2) Time intensity curve of the selected ROI demonstrates type II time intensity curve with fast initial enhancement & plateau delayed phase. (F) DWI & (G) ADC map demonstrate high DWI signal(arrows) & low ADC signal for both ROI (1) Rt. interstitial lesion & ROI (2) Rt. enlarged axillary lymph node indicating restricted diffusion.ADC values were $0.72 \times 10^{-3} \text{ sec/mm}^2$ & $0.86 \times 10^{-3} \text{ sec/mm}^2$ for both ROI (1) & (2) respectively. Diagnosis: Right Inflammatory carcinoma.

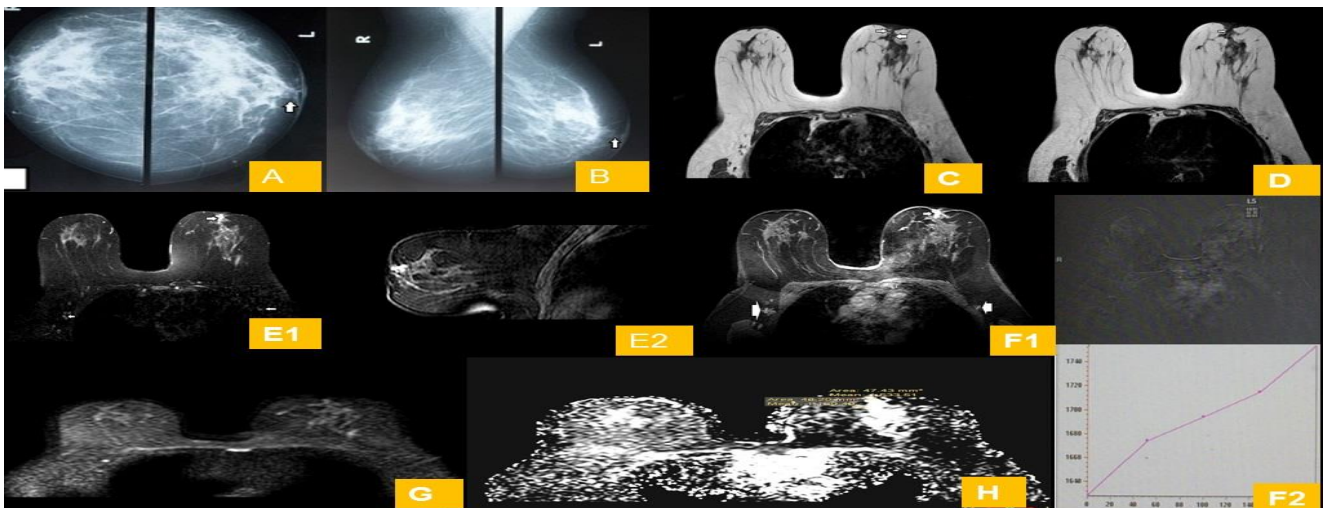


Fig. (3): a 50 years old female patient presented with left bloody nipple discharge.(A) & (B) mammographic CC & MLO views respectively show left retro-areolar abnormal density denoting focal asymmetry (arrow).(C) Axial T1 WI & (D) axial T2 WI show a retroareolar linear area displaying isointense signal in both T1WI & T2WIs (arrows). (E1) axial & (E2) Sagittal fat suppression sequences shows retroareolar ductal hyperintense signal (⇒) with bilateral small axillary lymph nodes (⇐). (F1) axial post contrast T1 with fat suppression image shows bilateral subcentimetric axillary lymph node enhancement (big arrows) & left focal ductal retroareolar non mass enhancement (small arrow). (F2) shows Type I curve (persistent). (G) DWI shows high signal & (H) ADC map shows high signal with mean ADC value was $1.2 \times 10^{-3} \text{ sec/mm}^2$. Diagnosis: Left Duct Ectasia.



Fig. (4): a 49 years old female with lung cancer presented with enlarged right axillary lymph node, Rt. mastalgia, Rt. breast skin thickening & nipple retraction. (A) & (B) CC & MLO mammogram views represent Rt. breast skin thickening (arrow) & increased density of the right retro-areolar region denoting focal asymmetric density. (C) & (D) axial T1 WI & axial T2 WI respectively demonstrate nipple retraction, skin thickening (arrows \hat{u}), Rt side multiple enlarged axillary lymph nodes ($\Downarrow \Rightarrow$), T2 WI also shows interstitial hyperintense signal denoting interstitial edema. (E1) & (E2) axial & sagittal SPAIR respectively show enlarged right axillary lymph nodes (\square) & multi focal hyperintensity signal of right breast & chest wall. (F1) Axial T1 post contrast with fat suppression demonstrates right moderate BPE & homogeneous enhanced multiple pathological large right axillary lymph nodes (Big arrow \Rightarrow). (F2) ROI on the breast parenchymal enhancement represents type III curve wash out, while (F3) represents the plateau curve type of lymph node ROI. (G) Image demonstrates high signal on DWI of the parenchymal lesion & axillary lymph node & low signal on (H) ADC map both indicate restricted diffusion. ADC values are $0.75 \times 10^{-3} \text{ sec/mm}^2$ for parenchymal lesion & $1.2 \times 10^{-3} \text{ sec/mm}^2$ for axillary lymph node. Metastasis to the Rt. breast from lung cancer is proven.

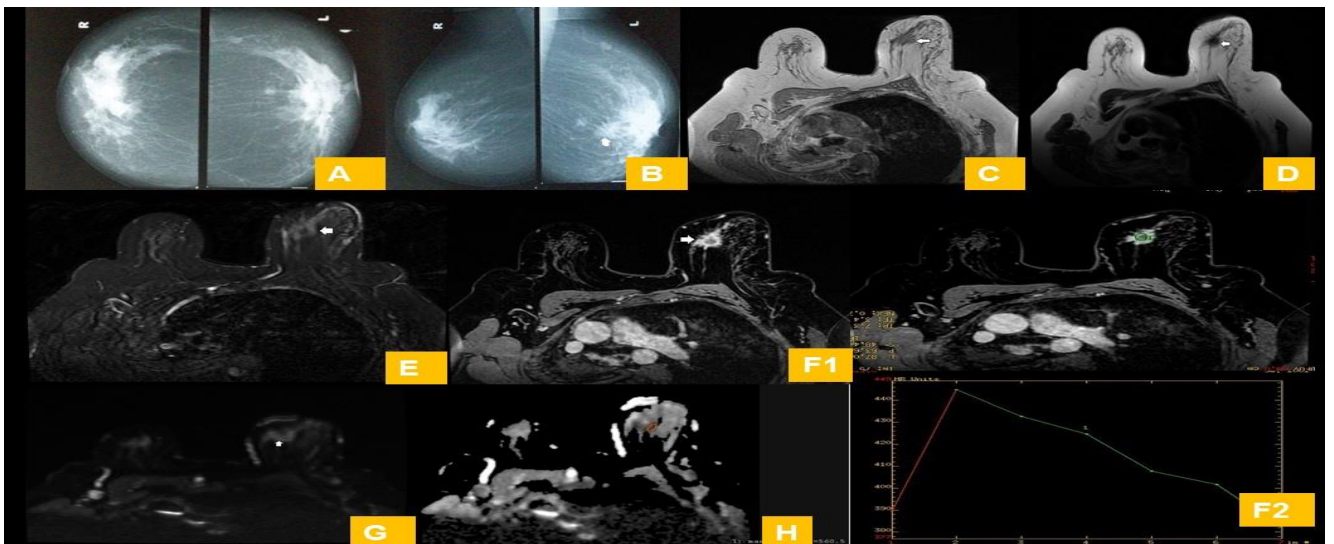


Fig. (5): a 62 years old woman presented with left breast lump, mastalgia, skin thickening. (A) & (B) CC & MLO Mammogram views show focal breast asymmetry seen at the left breast (arrow) with ACR a fibroglandular density. (C) Axial T1 WI demonstrates left breast isointense signal of ill-defined soft tissue lesion with irregular spiculated margins (arrow) & slight skin thickening. This lesion displays hypointense signal on (D) Axial T2WI (arrow) & displays hyperintense signal on (E) Axial STIR (arrow). (F1) Axial T1 post contrast with fat suppression shows the mass with marked peripheral enhancement (arrow) & bilateral enhanced small axillary lymph nodes. (F2) shows the ROI & Type III (washout) curve of the mass. (G) DWI shows high peripheral mass signal with low signal at the center (arrow). (H) ADC map reveals low peripheral mass signal with mean ADC value of $0.56 \times 10^{-3} \text{ sec/mm}^2$ Left breast invasive ductal carcinoma is proven.