

# Differential Diagnosis of Breast Discharge

## Unilateral Nipple Discharge

Unilateral nipple discharge: "Of the 7 basic types, i.e., milky, multicolored and sticky, purulent, clear (watery), yellow (serous), pink (serosanguineous), and bloody (sanguineous), the last 4 are the surgically significant ones." "There was an increasing likelihood of the discharge being due to cancer when the discharge was, in order of increasing frequency, yellow, pink, bloody, or watery"

Reference: Leis HP. Management of nipple discharge. World J Surg 1989; 13:736-742

Bloody Discharge	Collins	Labus & Kowalak	Raftery and Lim	Tabar et al.	Leis	Collected
Breast cancer	x	x	x	x	x	
Breast duct papilloma	x	x	x	x	x	3
Paget's disease		x	x	x		
Fibrocystic disease				x	x	
Ductal ectasia				x		1

Galactorrhea	Goroll & Mulley	Porter	Eisenberg	Gomella
Pituitary tumors (prolactinoma)	x	x	x	x
Drugs	x	x	x	x
Hyperprolactinemia	x	x		x
Oral contraceptives	x		x	x
Breast inflammation	x			x
Prolonged breast feeding	x			x
Stress	x			x
Hypothyroidism	x		x	

### Bilateral Nipple Discharge

Bilateral, multipore, blood-negative, expressed-only nipple discharge need not be assessed with ductography. Such a pattern is common and is best categorized as benign physiologic discharge. Reference: Slawson SH, Johnson BA. Ductography: how to and what if? RadioGraphics 2001; 21:133 -150.

<b>Breast Discharge</b>		
<b>Cause</b>	<b>Clinical Features</b>	<b>Imaging Findings</b>
<b>BREAST PARENCHYMA</b>		
Breast cancer	Breast nodule.	Mass, asymmetry, malignant calcifications, architectural distortion, dilated duct(s) upstream from obstructing lesion.
Breast duct papilloma	Breast nodule.	Mass, dilated duct(s) upstream from obstructing lesion.
Paget Disease	Inflamed, tender breast.	Mass, asymmetry, skin thickening.
Fibrocystic disease	Tenderness.	Mass, asymmetry.
Ductal ectasia	Palpable asymmetry.	Dilated duct(s).
<b>BREAST SKIN</b>		
Breast cancer	Breast nodule.	Skin thickening, skin retraction.
Breast duct papilloma	Breast nodule.	Usually none.
Paget Disease	Inflamed, tender breast.	Skin thickening.
Fibrocystic disease	Tenderness.	Usually none.
Ductal ectasia	Palpable asymmetry.	Usually none.
<b>AXILLARY TISSUE</b>		
Breast cancer	Breast nodule.	Mass (primary axillary tail tumor), lymphadenopathy (metastases).
Breast duct papilloma	Breast nodule.	Usually none.
Paget Disease	Inflamed, tender breast.	Lymphadenopathy (inflammation or metastases).
Fibrocystic disease	Tenderness.	Usually none.
Ductal ectasia	Palpable asymmetry.	Usually none.

## References

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Goroll AH, Mulley AG. *Primary Care Medicine: Office Evaluation and Management of the Adult Patient*. 6<sup>th</sup> Edition. Lippincott Williams & Wilkins, Philadelphia, 2009.

Porter RS, Kaplan JL, Homeier BP. *The Merck Manual of Patient Symptoms*. Merck Research Laboratories, Whitehouse Station, New Jersey, 2008.

Raftery AT, Lim E. *Churchill's Pocketbook of Differential Diagnosis*. Churchill Livingstone, Philadelphia, 2001.

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