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## CONTRAST & BREASTFEEDING IT'S SAFE!

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The use of IV contrast agents in breastfeeding patients has been controversial in the past. Recently, guidelines within Charlotte Radiology and affiliated CMC and CIS facilities have been standardized. Dr. Sinai joins us in this issue of CRad Journal to answer common questions about these guidelines.

**Q:** Are MRI and CT contrast agents excreted in breast milk?

**Dr. Sinai:** Yes, but the amount is inconsequential. The expected dose absorbed from breast milk represents less than 0.04% to 1% of the recommended contrast dose for an infant undergoing an MRI or CT study, respectively.

**Q:** Current guidelines for breastfeeding after IV contrast administration are to continue breastfeeding without interruption. What is the matter with the old “pump and dump” approach?

**Dr. Sinai:** There is no evidence of risk with breastfeeding after IV contrast studies. However, if a mother is told to “pump and dump”, both the mother and baby may suffer adverse outcomes. For example, an abrupt decrease in breastfeeding markedly increases a mother’s risk of mastitis and can adversely affect her milk supply.

**Q:** How about the risks to the infant from breastfeeding cessation?

**Dr. Sinai:** Withholding breastfeeding makes formula

use likely. This will immediately alter the infants bowel flora encouraging pathogen overgrowth. Research suggests cow's milk formula exposure is an inciting event for type I diabetes. Additionally, the infant may refuse to feed from an artificial nipple resulting in distress for mother and child.

**Q:** If someone has additional questions about contrast and breastfeeding, or breastfeeding in general, what should they do?

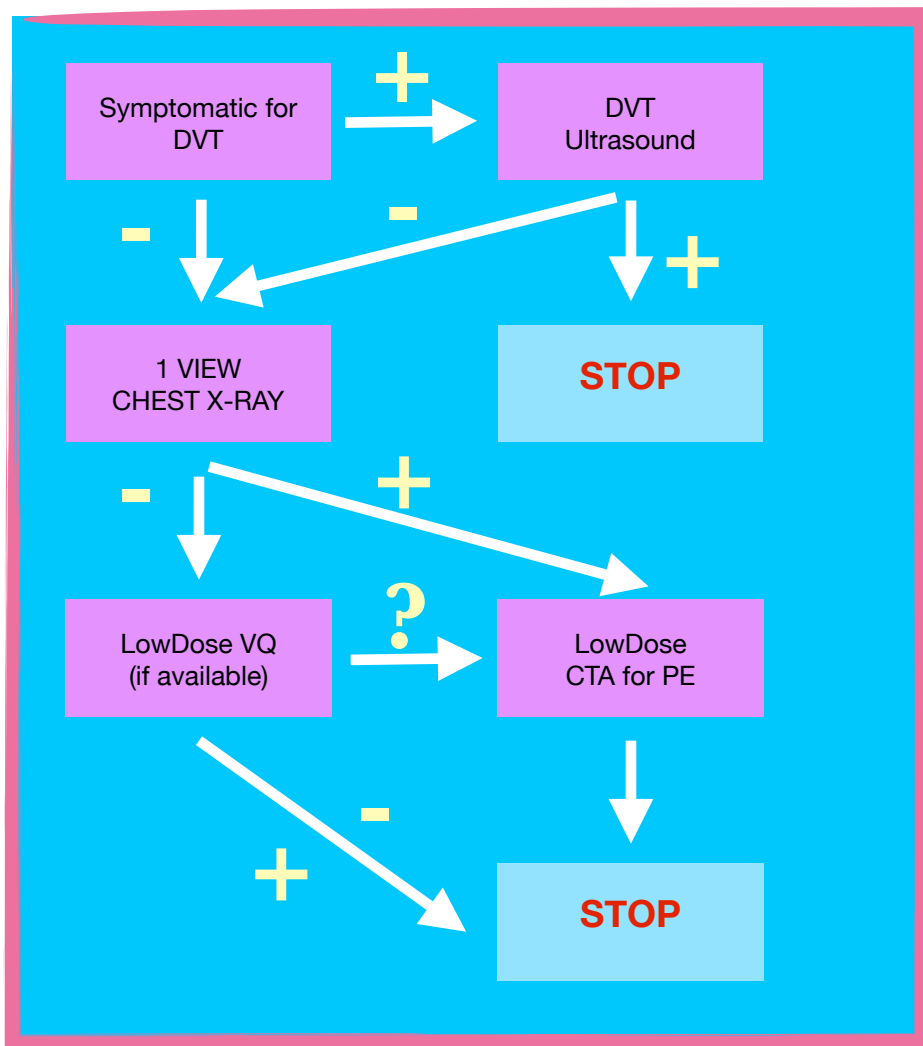
**Dr. Sinai:** Additional information about contrast can be found in the American College of Radiology’s Contrast Manual ([www.acr.org](http://www.acr.org)). For more information on breastfeeding, you can also contact your hospital IBCLC-lactation consultant.

# IMAGING IN PREGNANCY

## Suspected Pulmonary Embolus

PE can be fatal during pregnancy. While post-partum women are at highest risk of VTE, pregnant women are still at higher risk than their non-pregnant counterparts. Increasing concern about radiation exposure (particularly to proliferative breast tissue) has led to revisions in imaging guidelines during pregnancy. Of course, fetal radiation exposure is also of primary concern. Note should be made however, that even the combination of chest x-ray, VQ scanning, CTA for PE, and digital subtraction angiography results in fetal radiation doses well below the levels that induce fetal anomalies.

The new algorithm based on recent literature and 2011 American Thoracic Society guidelines is summarized to the right ---->



# IMAGING IN PREGNANCY

## Appendicitis

### FIRST LINE TEST

RLQ Ultrasound

### ALTERNATIVES

Non-contrast MRI is generally preferred, especially in the 1st trimester. Contrast-enhanced CT is preferred when MRI is not available or is indeterminate, and preferably in the 2nd-3rd trimester.

# IMAGING IN PREGNANCY

## Renal Colic

### FIRST LINE TEST

Renal Ultrasound

### ALTERNATIVES

Low dose renal stone CT can be used if ultrasound is indeterminate. MRI is of uncertain utility but has no radiation risk

# IMAGING WITH Gadolinium

### MR CONTRAST AGENTS

Gadolinium contrast agents, while safe in breastfeeding mothers, should only be used with extreme caution during pregnancy. Gadolinium contrast should be used only when: it is required for diagnosis, its use will affect care during pregnancy, and it is imprudent to wait until after delivery. Contact your radiologist for more information.



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### Did you know?

Radiation dose to the breast is 30-360 times higher with CTA than VQ scanning.

### QUESTIONS?

More information is available at [www.imagewisely.org](http://www.imagewisely.org) or contact us at [radiationsafety@charlotteradiology.com](mailto:radiationsafety@charlotteradiology.com)