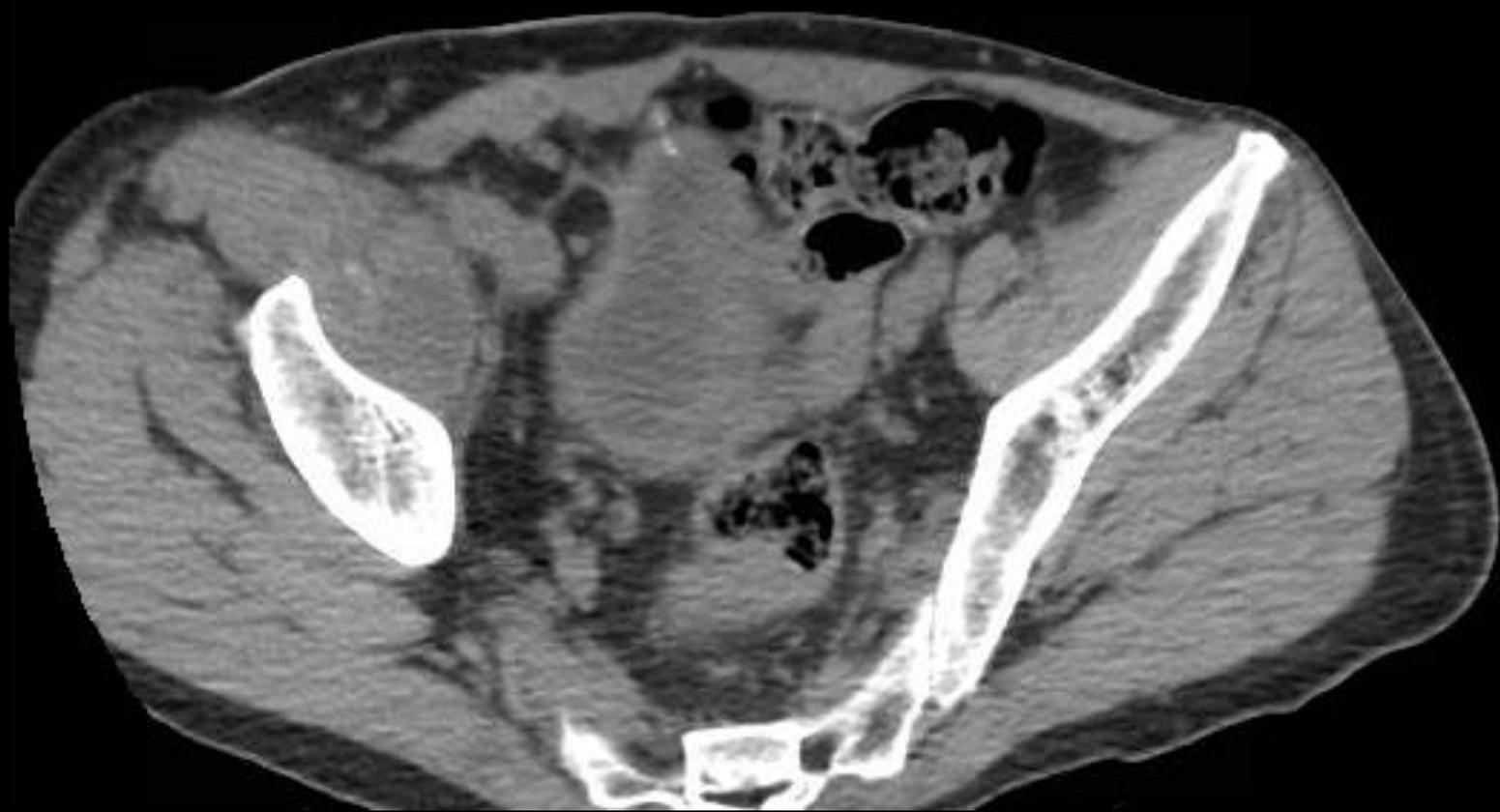


- 51 year-old male with renal transplant presents with right hip pain over 3 days

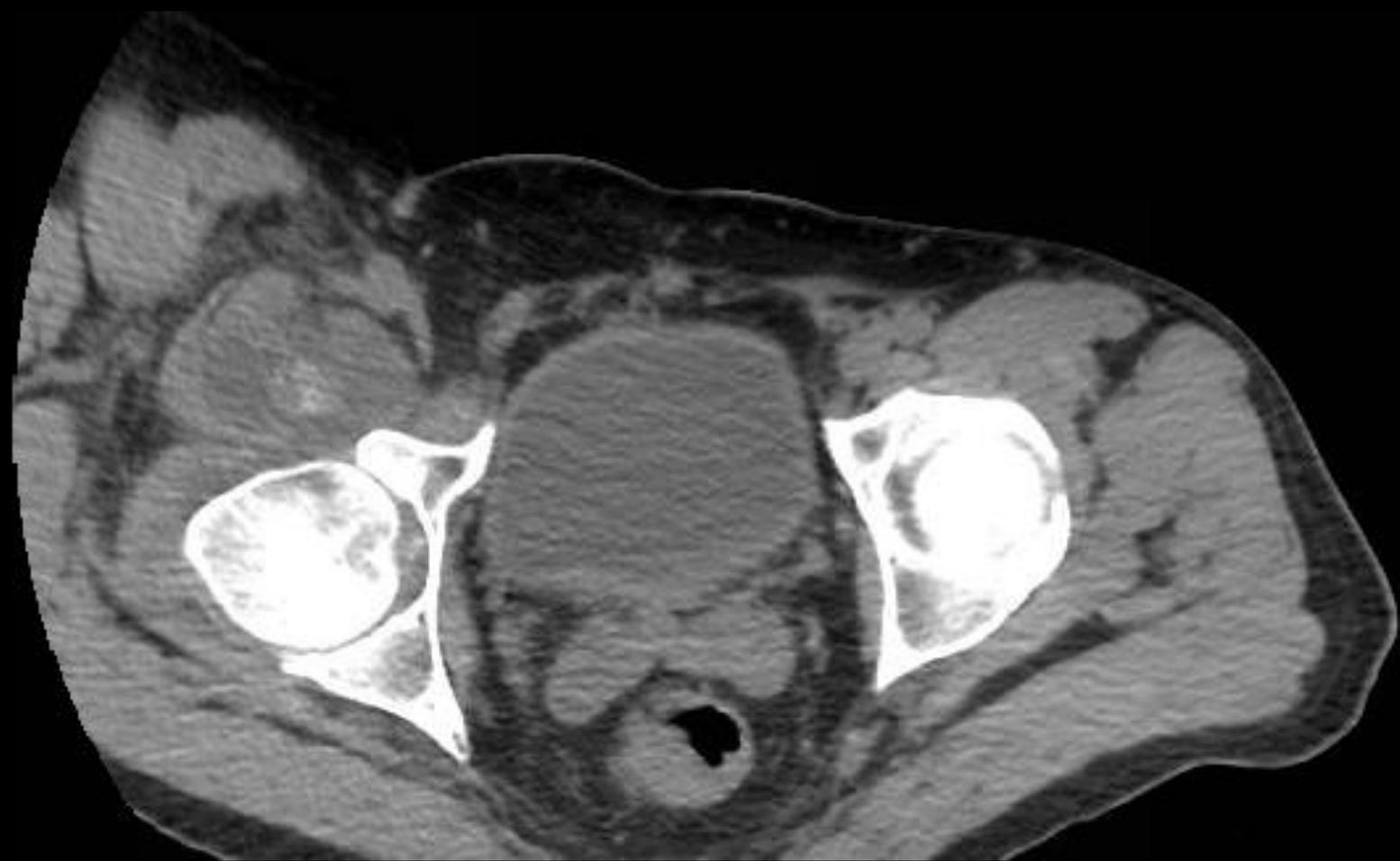






















# DDX?

- Calcific tendinitis
- Septic joint
- Gout
- ????



IGHT  
2A

Nov 2015



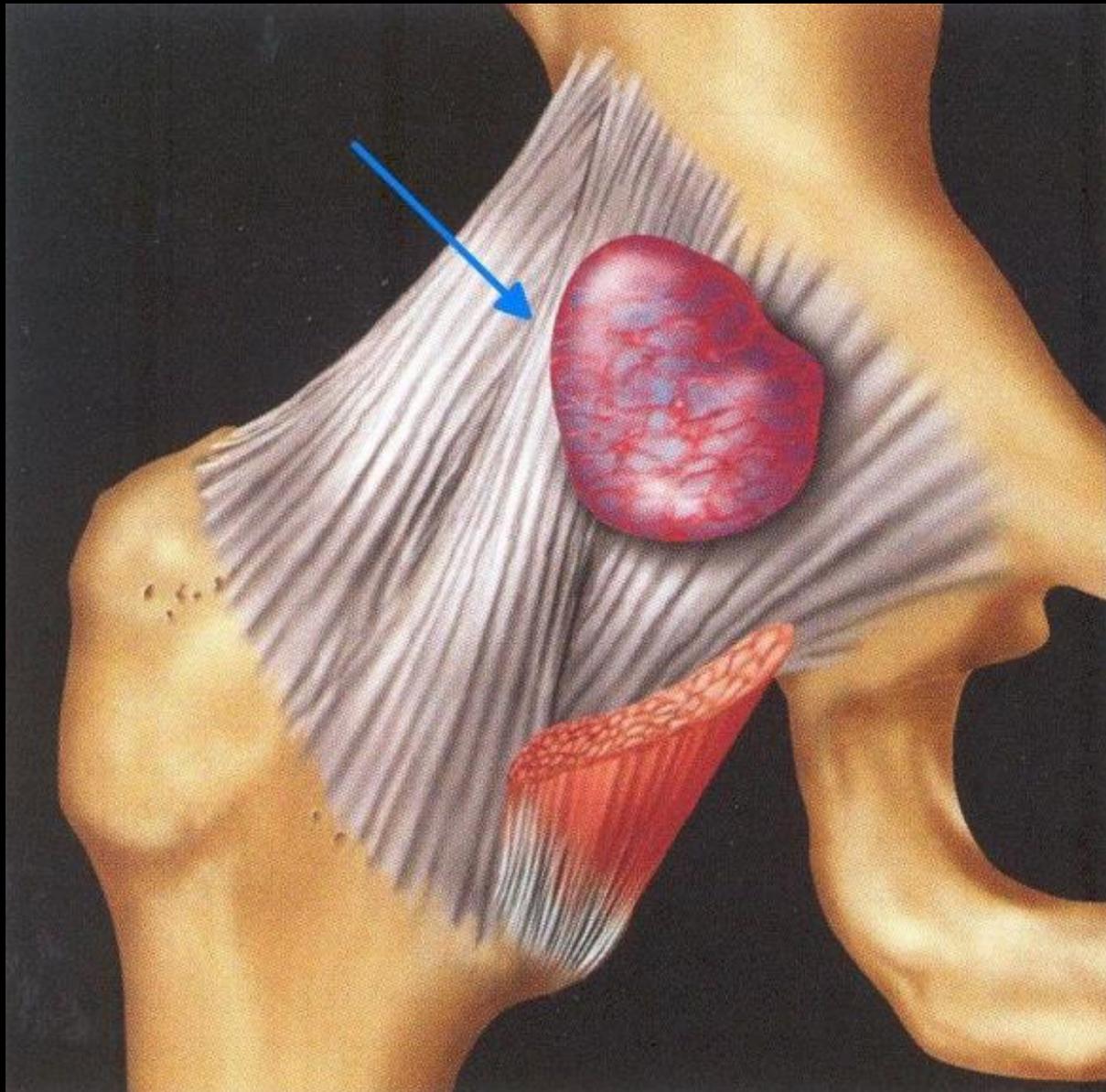
Nov 2015



Nov 2015



Ultrasound-guided iliopsoas bursa  
aspiration



- Aspirated 15-20 mL yellow fluid from iliopsoas bursa (contaminated with blood)

FLUID			
Fluid Type			Synovial
Fluid WBC			66870
Fluid RBC			118000
Neutrophils Fluid			95
Lymphocytes fluid			2
Macrophages fluid			3

Component	Value
<b>Crystal Analysis</b>	Positive
Comment:	
MONOSODIUM URATE CRYSTALS PRESENT	

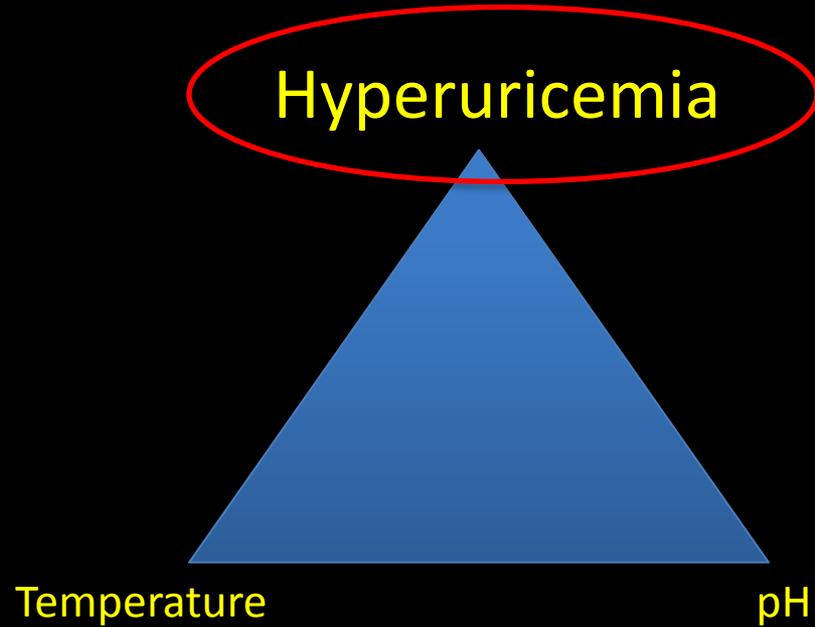
# Gout Following Renal Transplantation

- 7.6% - frequency of newly diagnosed gout within 3 years of renal transplantation (United States Renal Data System)
- Risk Factors
  - Males, age
  - BMI
  - Cyclosporin vs. tacrolimus
  - GFR (<44)

# Our patient

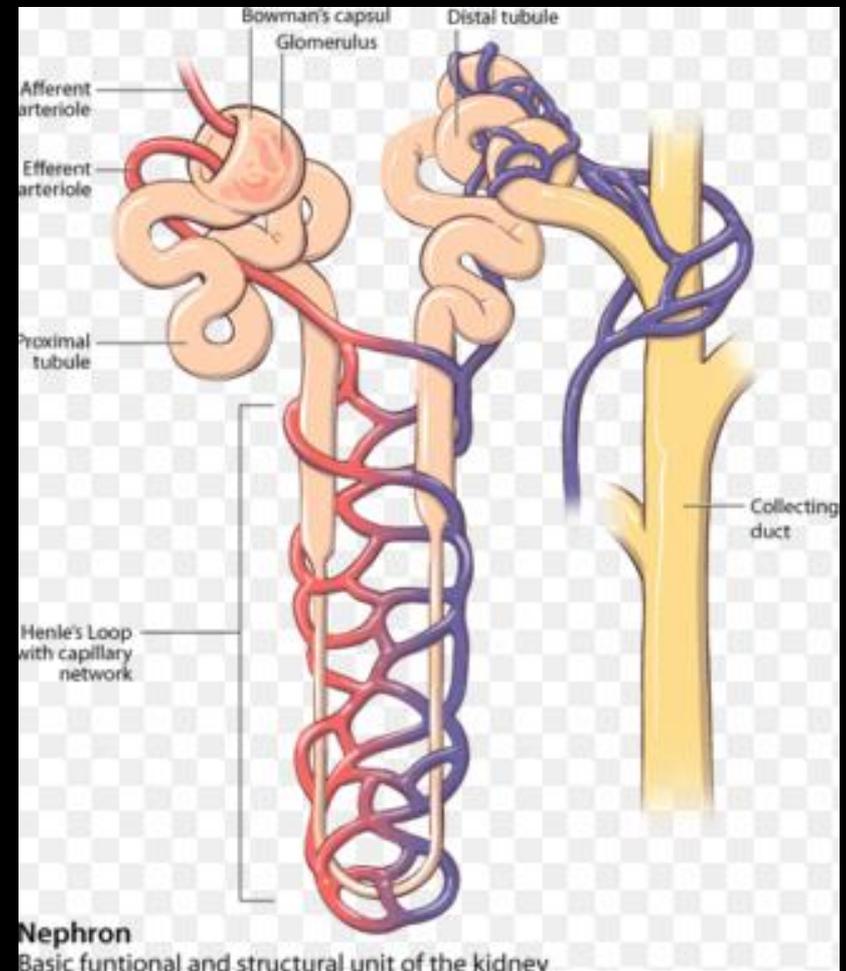
- Male
- 51
- Tacrolimus trough → 21 ng/dL
- GFR ~45
- Serum uric acid ???

# Gout - Physiology



# Hyperuricemia in Renal Transplantation

- Cyclosporin > tacrolimus
  - Increased uric acid reabsorption
  - Decreased uric acid secretion
- Other factors
  - Diuretics
  - Poor graft function



# Cyclosporin induced hyperuricemia

*Table 1. Prevalence of hyperuricemia and gout in renal transplant patients*

Source	CsA		Non-CsA	
	↑ Uric Acid	Gout	↑ Uric Acid	Gout
Lin (1)	84	7	30	0
Ahn (2)	51	3.5	19	0
Delaney (3)	82	28	28	8
Gores (5)	80	4.6	55	0
West (6)	NR	9.7	25	0
Kahan (7)	30	2	NR	NR
Ben Hmida (4)	NR	13	NR	0

# Clinical Features of Gout following Tx

**Table 1.** Clinical characteristics of the patients

Patient	Age, Sex	Gout onset, years posttransplant	Joint involvement*	Radiographic abnormalities†	Uric acid, mg/dl	Creatinine, mg/dl	CSA treatment‡	Prednisone, mg/day
1	40/M	11	Hip	-	9.4	1.6	-	15
2	59/M	1.5	Shoulder	-	10.5	3.1	+	12.5
3	35/M	2	SI	+	9.2	2.2	+	15
4	45/F	3	SI	+	15.2	3.8	+	15

Cohen MR. Arthritis Rheum. 1994

# Take Home Points

- Gout is not uncommon following renal transplantation
- Hyperuricemia predisposes to gout
- Immunomodulators can lead to hyperuricemia
- Don't be surprised with unusual/proximal locations for gout in the transplant setting

# References

1. Cohen MR. Proximal gout following renal transplantation. *Arthritis Rheum.* 1994 Nov;37(11): 1709
2. Clive DM. Renal Transplant-Associated Hyperuricemia and gout. *J Am Soc Nephrol.* 2000 May;11(5):974-9
3. Abbot KC et al. New-Onset Gout after Kidney Transplantation: Incidence, Risk Factors and Implications
4. Radsource