SF 14 MS-02

English

Special Focus Session (SF 14)

Sep. 23 (Sat), 08:40-09:00
Grand Ballroom 103, 1F

Chairperson(s):

Sang Hoon Lee *University of Ulsan College of Medicine, Asan Medical Center, (Korea)*

Sheen-Woo Lee *The Catholic University of Korea Eunpyeong St. Mary's Hospital, (Korea)*

DECT : crystal and edema

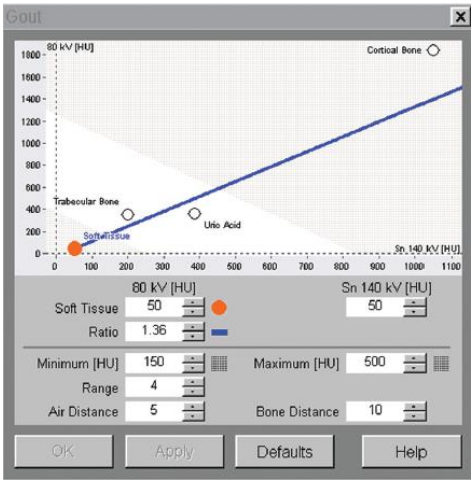
Eun Hea Park

Jeonbuk National University Hospital, Korea mbgracie@gmail.com

[Gout and DECT]

General introduction

Initially, dual-energy CT was shown to be capable of enabling reliable diagnosis and identification of uric acid nephrolithiasis by taking advantage of attenuation differences among various materials.



Artifacts of DECT

TABLE 2: Incidences and Types of Artifact Identified on Dual-Energy CT

Artifact	Patients ($n = 50$)	
	No.	%
Nail bed	44	88
Skin	22	44
Submillimeter	14	28
Beam hardening	8	16
Other	6	12

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TABLE 4: Artifact-Reduction Methods by Artifact Type

Artifact Type	Artifact-Reduction Methods
Motion	• Use tape or blocks to immobilize the patient's limbs • Increase the speed of the gantry from 1 rotation per second to 1 rotation every 0.3 s
Single pixel	• Use D24 kernel or Q34 kernel (iterative reconstruction) • Increase Range parameter from 3 to 5
Beam-hardening and metal	• Use D24, D34, or Q34 kernel to reconstruct • Remove metal (e.g., jewelry) where possible
Nail bed, skin, plantar fascia	• Increase Air Distance parameter from 5 to 10 • Decrease Bone Distance parameter from 10 to 5 • Use D33 kernel to reduce skin artifact
Vascular	• Increase Minimum and Range parameters • Add a new reconstruction with a softer kernel (D20 or D24) or add iterative reconstruction (e.g., Q30)

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[Primary Image findings of Gout in other studies, US]
Hyperechoic tophi : Double line sign, Wet sugur sign, Speckle sign
Eccentric bony erosion: Overhanging edge

[Nonspecific Image findings]

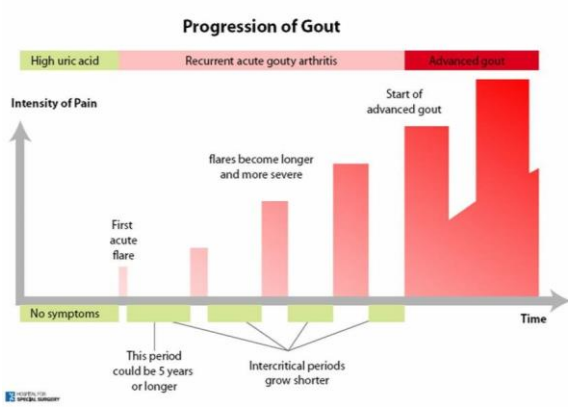
Soft tissue edema

Joint effusion

Synovial hypertrophy

Hyperechoic spots

[Clinical Progression of Gout]



Time course of episode(s) ever
Presence (ever) of ≥2, irrespective of anti-inflammatory treatment:
- ► Time to maximal pain <24 h
- ► Resolution of symptoms in ≤14 days
- ► Complete resolution (to baseline level) between symptomatic episodes