

CT Angiogram Sign :

1

CT CT angiogram sign

가 60
CT angiogram sign , CT angiogram sign

1) , 2) , 3) , 4) , 5)

가 60 48 (80%) CT angiogram sign ,
($p > 0.05$).
[(46%), (15%)], [(63%), (20%)],
[(60%), (4%)]
($p = 0.030, 0.003, 0.001$). [(32%), (16%)] [(37%), (16%)]
가 ($p = 1.588, 2.737$).
CT CT angiogram sign
, CT angiogram sign

(1) CT angiogram sign (ho-
mogeneous hypoattenuating lu-ng consolidation)
3 cm 가 , 가 CT CT angiogram sign
가 CT 가
, CT angiogram sign
Vincent (3) “ ”
CT angiogram sign , 가 . CT CT angiogram sign
CT
. Murayama (4) 5
4 CT angiogram sign
, Shah (5) CT
51 15
(29%) CT angiogram sign . 1996 4 1998 6
CT

60

1 1999 6 23 1999 10 8 59 32 , 28 ,

26
(n=20), (n=1)
(n=13), (n=5),
(n=3) 5
34, (n=)
14), (n=15), (n=5)
(n=11), (n=9),
(n=2), (n=1), (n=1)
가 10
CT scan 60 GE Hispeed Advantage
(General Electrics, Milwaukee,WI, U.S.A.) 7 mm
, 1:1 1:1.2 pitch CT(120kVp, 220mA,
1)
(Iopamiro 370, Schering AG,
Berlin, Germany) 100 ml 2 ml
30 - 35
CT CT angiogram sign
CT angiogram sign 1)
], 2) 가
가
[],
3) 가
[], 4)
가
[
], 5) 가
가 [

CT
가
(, ,)
chi-square
test Fisher's Exact test
60 48 CT angiogram sign
80% 26 22
(85%) 34 25
(74%) 14 10 (71%),
15 10 (67%), 5 5 (100%)
CT angiogram sign
(p> 0.05).
(Fig. 1) 22 10
(46%) 25 4 (15%)
(p=0.030).
(n=4) 2 2
(Fig. 2) 22 14 (63%)
25 5 (20%)
(p= 0.003).
(n=5) 2 3
(Fig. 3)
22 7 (32%), 25 4
(16%) 가 (p=
1.588). (Fig. 4) 22 19

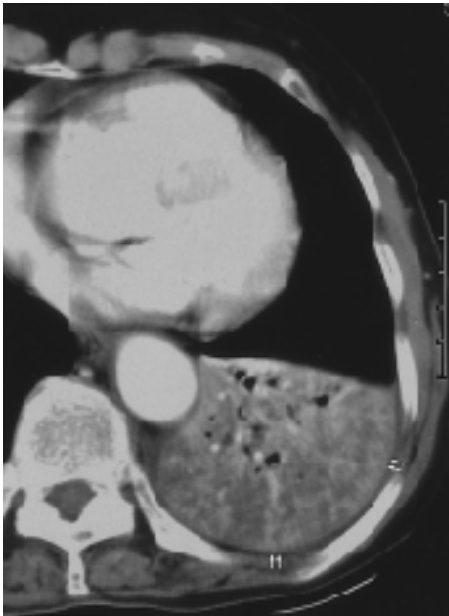


Fig. 1. Discontinuity of vessel in a 66-year-old man with squamous cell carcinoma.
CT scan at the level of the aortic-pulmonary window shows discontinuity of vessel (arrow).

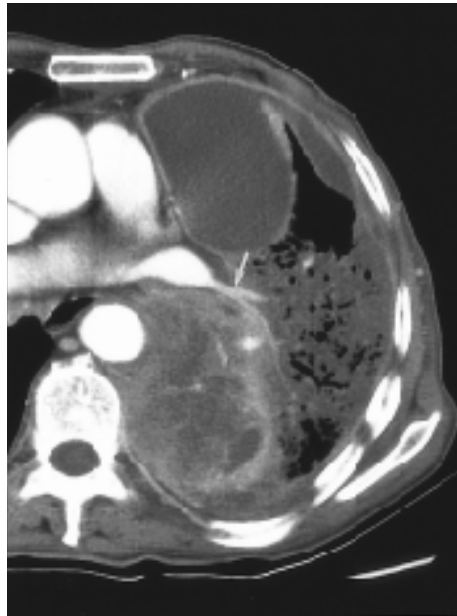


Fig. 2. Avascular zone in a 81-year-old man with non-small cell carcinoma.
CT scan at the level of the aortic arch shows an avascular mass (arrow) and displacement of adjacent vessels.

7 (37%),
 25 4 (16%),
 (p=2.737).
 (Fig. 5)
 22 CT angiogram sign
 15 9 (60%) (1) CT
 25 1 (4%)
 가 (p= 0.001). 가 (2-4),
 (n=1) (Fig. 6). CT
 CT angiogram sign 가 80% CT
 (p<0.05)



3



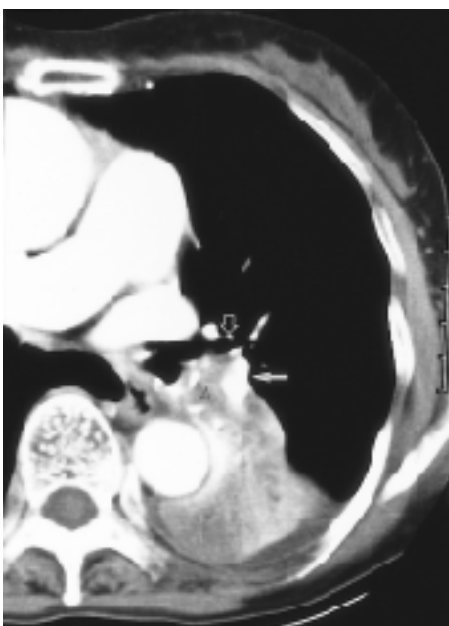
4

Fig. 3. Abnormal vessel in a 78-year-old woman with squamous cell carcinoma.

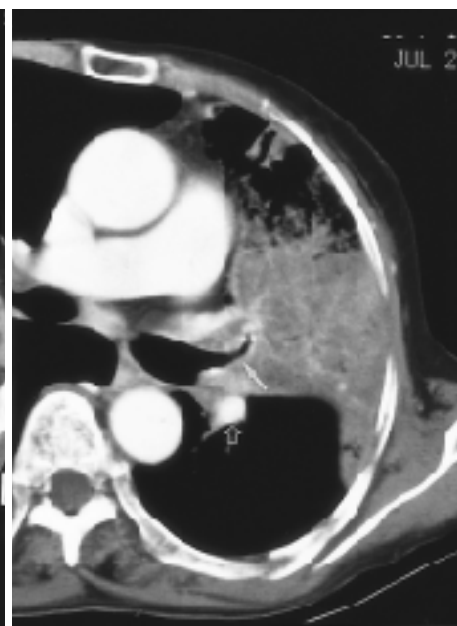
CT scan at the level of the left lower lobe shows irregular, bizarre vessels (arrows) in peripheral portion.

Fig. 4. Displacement of vessel in a 81-year-old man with non-small cell carcinoma.

CT scan at the level of the mid-mediastinum shows displacement of left superior pulmonary vein (arrow) by low density mass suggesting lung cancer.



5



6

Fig. 5. Separation of bronchovascular bundle in a 78-year-old woman with squamous cell carcinoma.

CT scan at the level of the right main pulmonary artery shows separation between left upper lobar bronchus (open arrow) and left pulmonary artery (arrow) by a low density mass (arrow-head).

Fig. 6. Separation of a bronchovascular bundle in a 66-year-old woman with pulmonary tuberculosis.

CT scan at the level of the carina shows luminal narrowing and bronchial wall thickening of left upper lobar bronchus (arrow) and separation between left upper lobar bronchus and left lower lobar artery (open arrow) by low density lesion.

	Shah (5)	CT angiogram sign	
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angiogram sign			가
	CT angiogram sign	가	가
	가	CT	가
	Shah (5)	가	가
		가	
(46%)	(15%)	CT angiogram sign	CT
	(n=2)	(n=2)	
(6).			
		(63%)	
(7).	2	3	
	가		
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CT		CT	

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CT Angiogram Sign : Differentiation of Malignant and Benign Lung Consolidation¹

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Purpose : To assess the frequency of the CT angiogram sign, as seen on spiral CT and to evaluate the usefulness of this sign in the differentiation of benign and malignant lung disease.

Materials and Methods : Sixty patients with lung consolidation, as seen on mediastinal window setting were studied retrospectively and the frequency of the CT angiogram sign was determined. In cases in which the sign was present, the following points were analysed; 1) discontinuity of vessels; 2) the avascular zone; 3) abnormal vessels, 4) displacement of pulmonary vessels, 5) separation of bronchovascular bundles.

Results : Of sixty patients with lung consolidation, 48 patients showed the CT angiogram sign; its frequency showed no significant statistical differences between benign and malignant disease ($p > 0.05$). There were, however statistically significant differences between discontinuity of vessels (malignant, 46 %; benign, 15 %; $p = 0.030$) the avascular zone (malignant, 63 %; benign, 20 %; $p = 0.003$) and separation of bronchovascular bundles (malignant, 60 %; benign, 4 %; $p = 0.001$). In the case of abnormal vessels (malignant, 32 %; benign 16 %; $p = 1.588$) and displacement of pulmonary vessels (malignant, 37 %; benign, 16 %; $p = 2.737$) there were no statistically significant differences.

Conclusion : The CT angiogram sign, as seen on spiral CT was nonspecific Where the sign is present, angiogram sign, discontinuity of vessels, the avascular zone and separation of bronchovascular bundles may be useful signs for the diagnosis of central lung cancer with obstructive pneumonitis.

Index words : Thorax, CT
Pulmonary arteries, CT
Pulmonary veins
Lung neoplasms, diagnosis
Lung, consolidation

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