

This is a teaching exercise based on the material used in :

Tondeur M, Piepsz A, Ham H, De Palma D, Roca I.
Interobserver reproducibility in reporting on Tc-99m DMSA
scintigraphy. A wide collaborative study.
Nucl Med Commun 2009;30:263-9

Compare your own interpretation of DMSA scans to the
interpretation of 61 independent observers

- * Give your own interpretation on 60 DMSA scans
- * Possible answers :
 - normal
 - abnormal
 - equivocal
 - poor quality

The slide following each DMSA scan summarizes the
answers of the 61 observers.

Data available

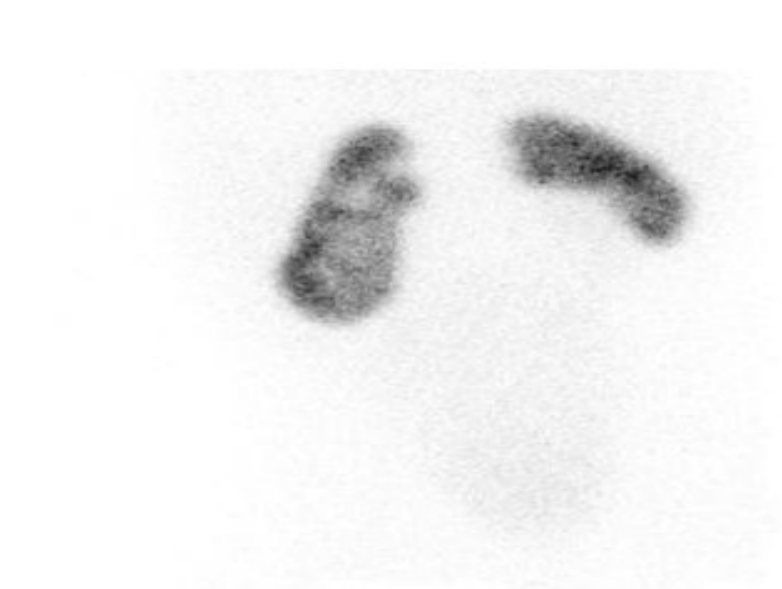
- For all the cases

Anterior, left posterior oblique and right posterior oblique views

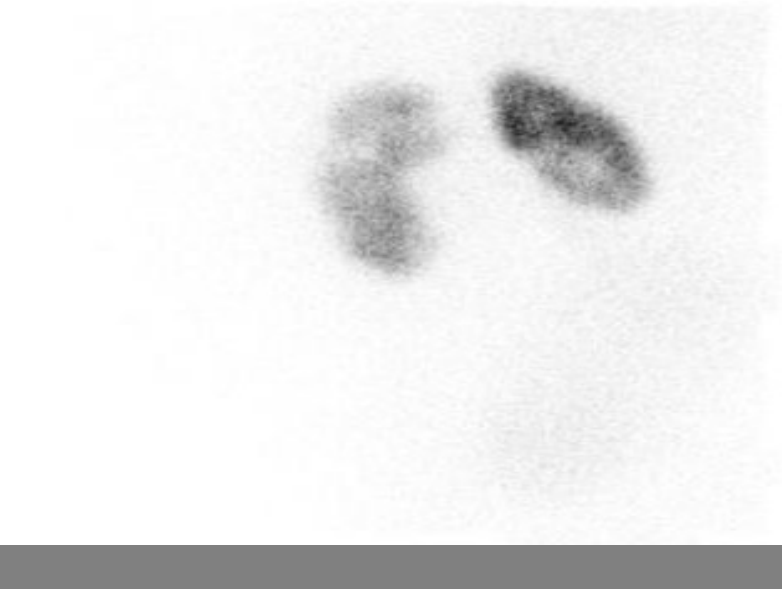
- In some cases

- Zoomed posterior view

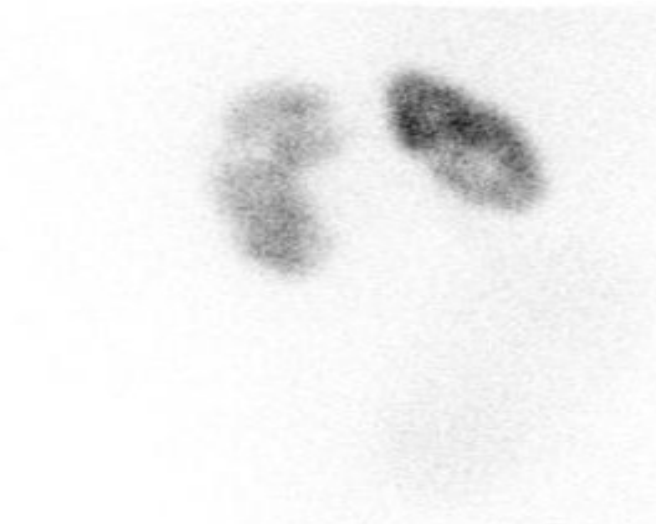
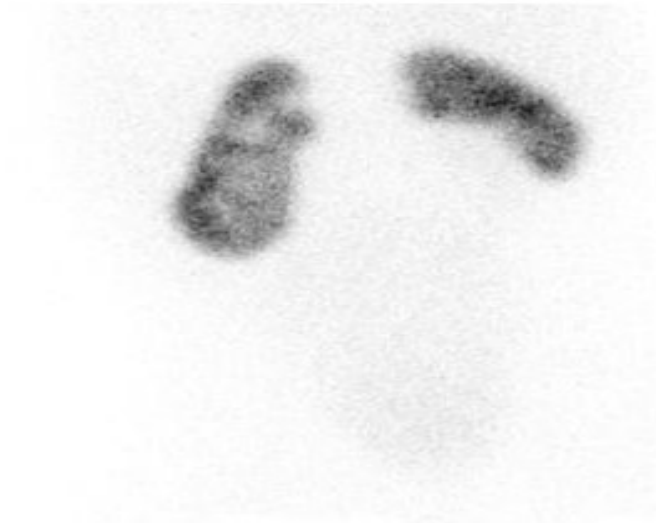
- Pin-hole view



CASE A1



CASE A1



	Left	Right
Normal	0	9.8
Abnormal	96.7	72.1
Equivocal	1.6	16.4
Poor quality	1.6	1.6



CASE A2

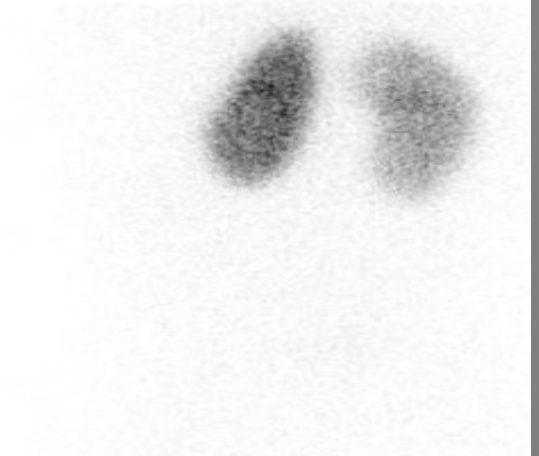
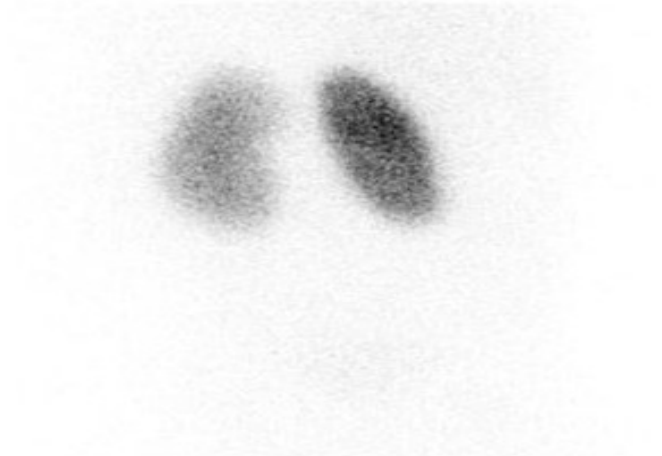
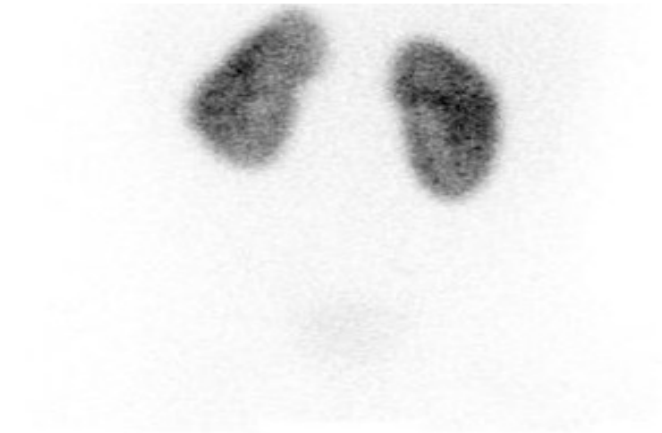


CASE A2

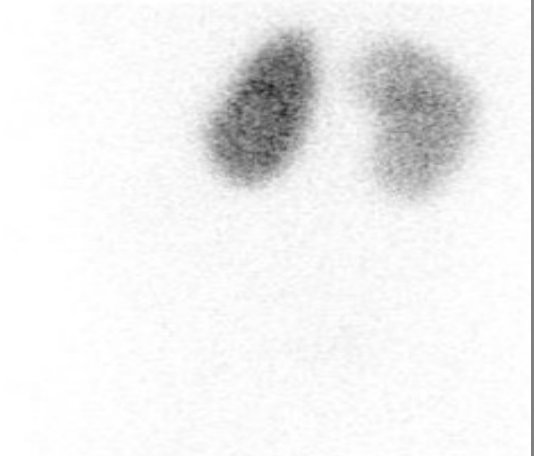
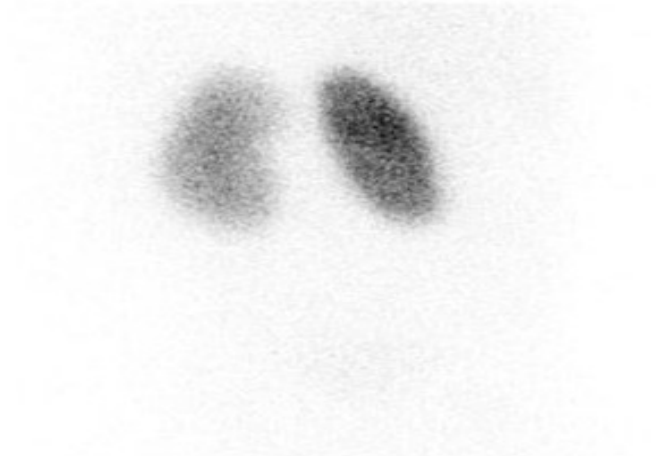
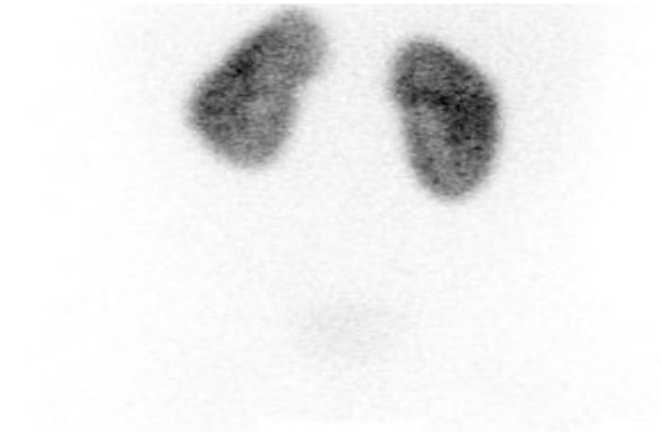


	Left	Right
Normal	75.4	91.8
Abnormal	14.8	1.6
Equivocal	9.8	4.9
Poor quality	0	1.6

CASE A3

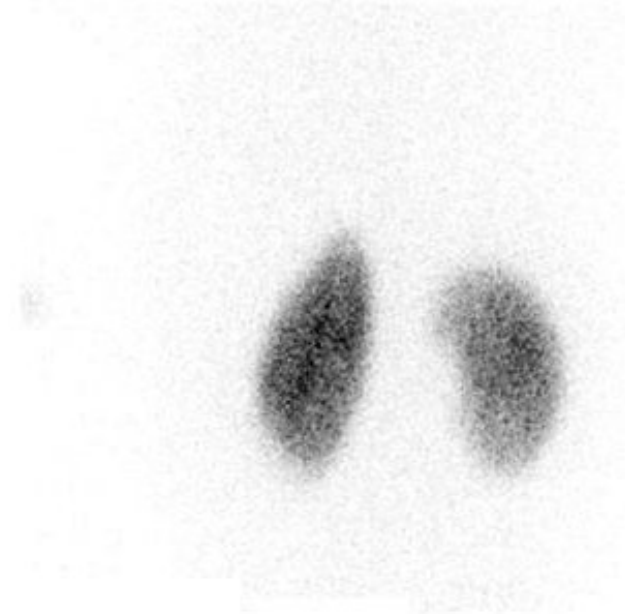


CASE A3

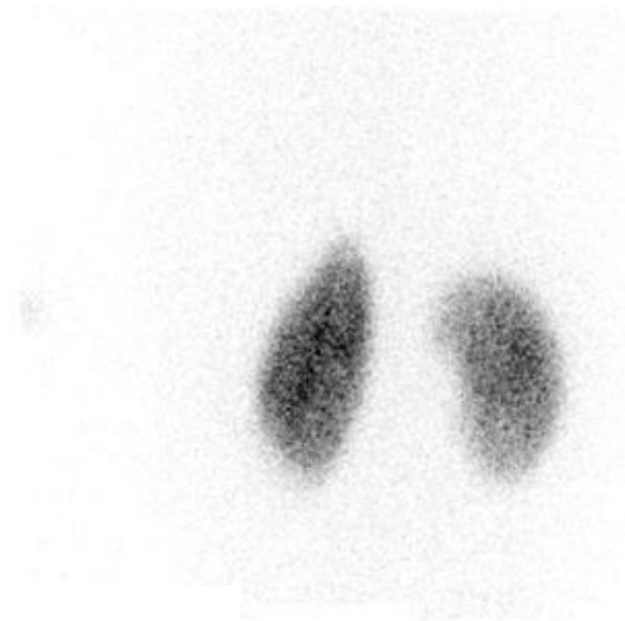


	Left	Right
Normal	83.6	88.5
Abnormal	0.0	1.6
Equivocal	9.8	4.9
Poor quality	6.6	4.9

CASE A4

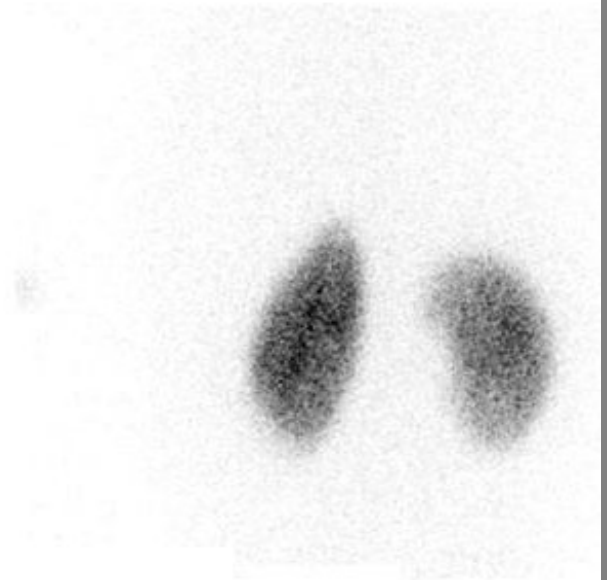


CASE A4



	Left	Right
Normal	91.8	93.3
Abnormal	0.0	0.0
Equivocal	4.9	3.3
Poor quality	3.3	3.3

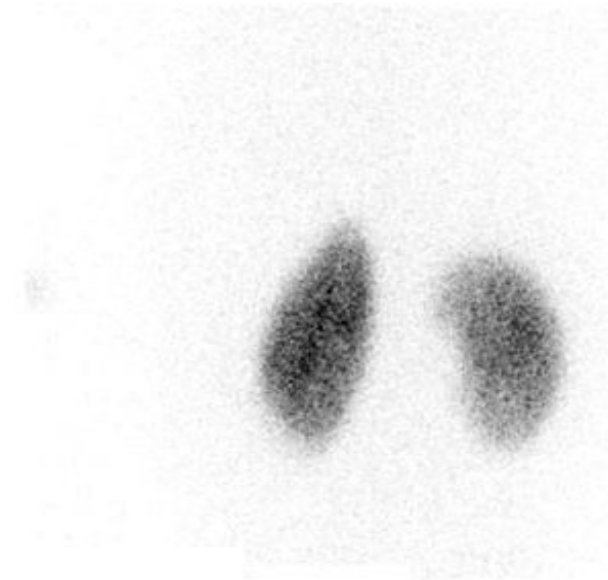
CASE A5



CASE A5



	Left	Right
Normal	88.5	93.3
Abnormal	3.3	1.7
Equivocal	4.9	1.7
Poor quality	3.3	3.3



CASE A6

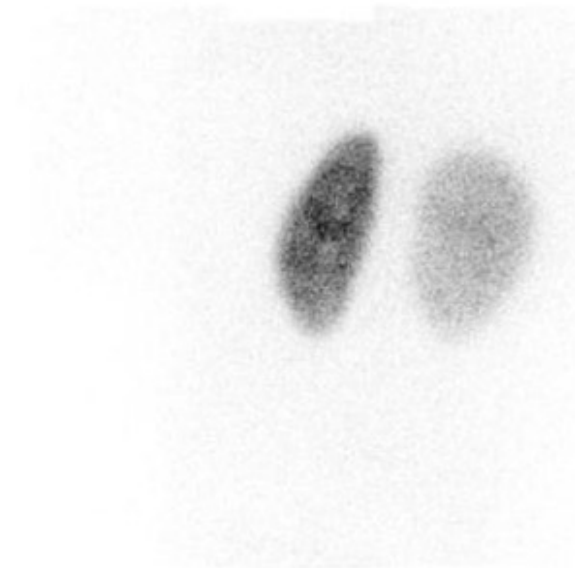
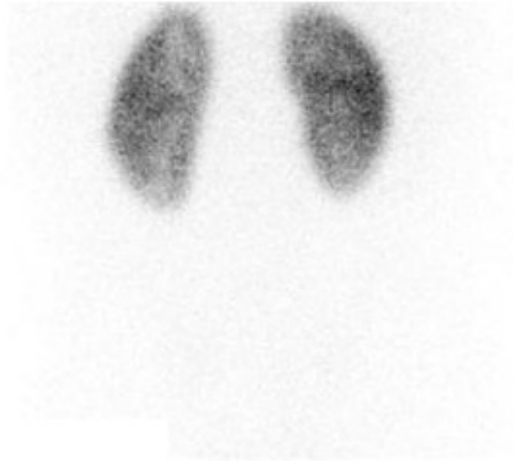


CASE A6

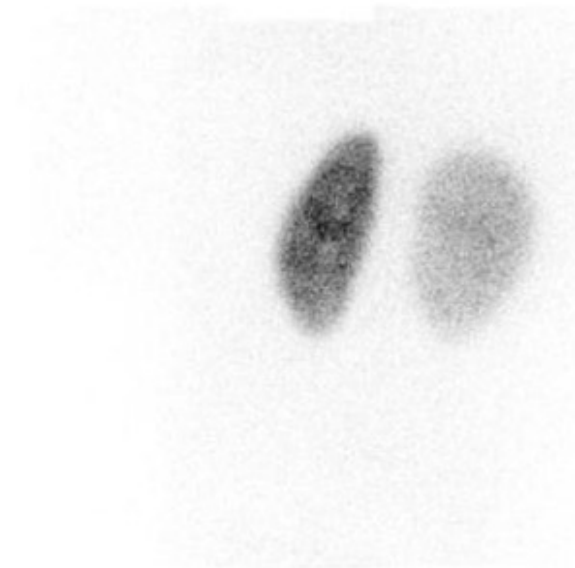
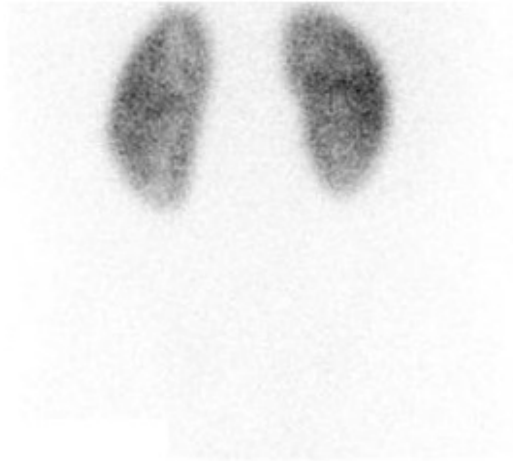


	Left	Right
Normal	84.5	0.0
Abnormal	5.2	94.9
Equivocal	10.3	5.1
Poor quality	0.0	0.0

CASE A7

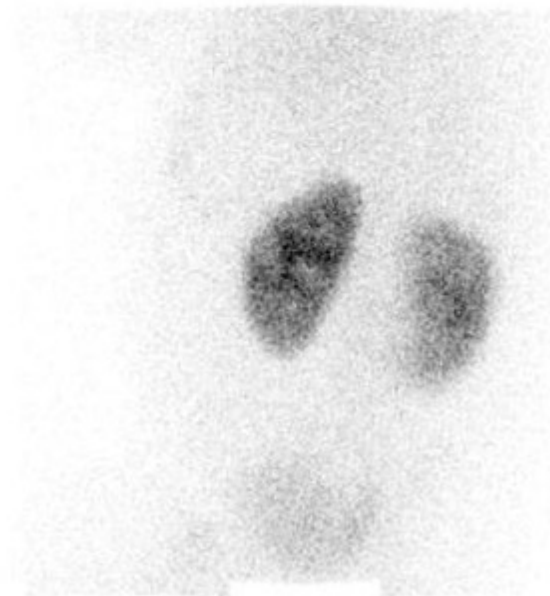


CASE A7



	Left	Right
Normal	80.3	91.8
Abnormal	8.2	1.6
Equivocal	9.8	4.9
Poor quality	1.6	1.6

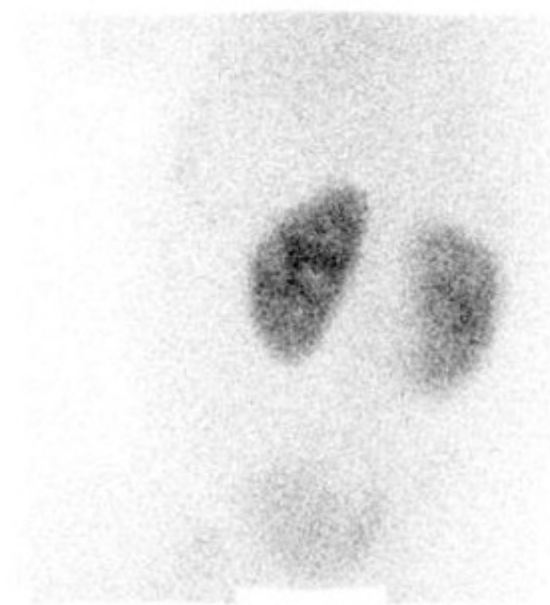
CASE A8



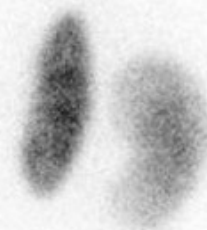
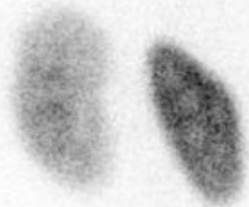


CASE A8

	Left	Right
Normal	73.8	80.3
Abnormal	4.9	1.6
Equivocal	13.1	11.5
Poor quality	8.2	6.6

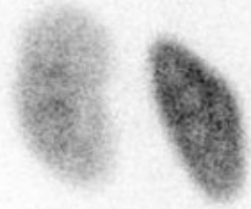


CASE A9

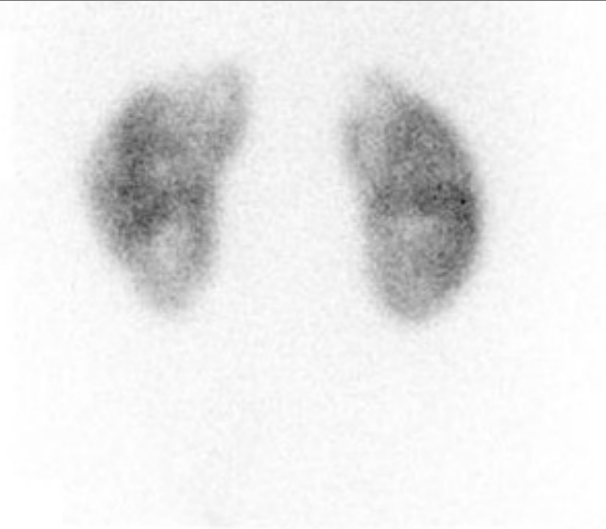


CASE A9

	Left	Right
Normal	78.3	90
Abnormal	10.0	3.3
Equivocal	10.0	5.0
Poor quality	1.7	1.7



CASE A10



CASE A10



	Left	Right
Normal	1.6	1.6
Abnormal	96.7	95.1
Equivocal	1.6	3.3
Poor quality	0.0	0.0

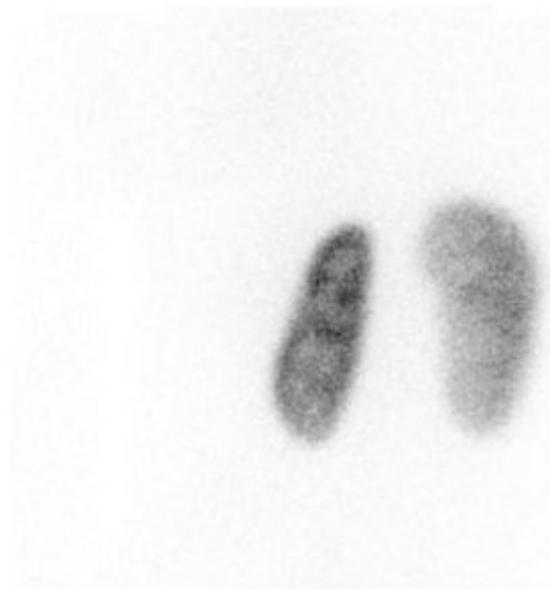


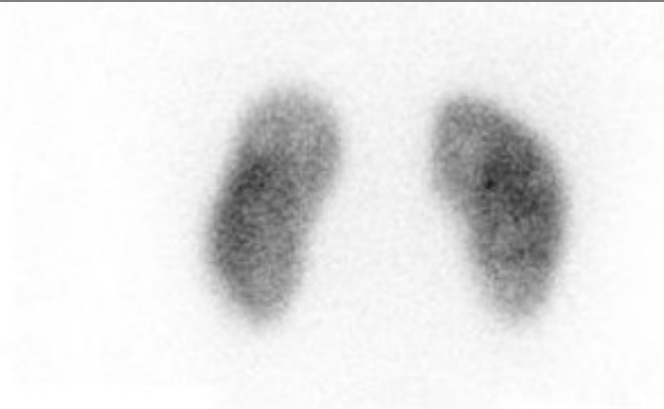
CASE A11



CASE A11

	Left	Right
Normal	63.9	95.1
Abnormal	16.4	0.0
Equivocal	19.7	4.9
Poor quality	0.0	0.0

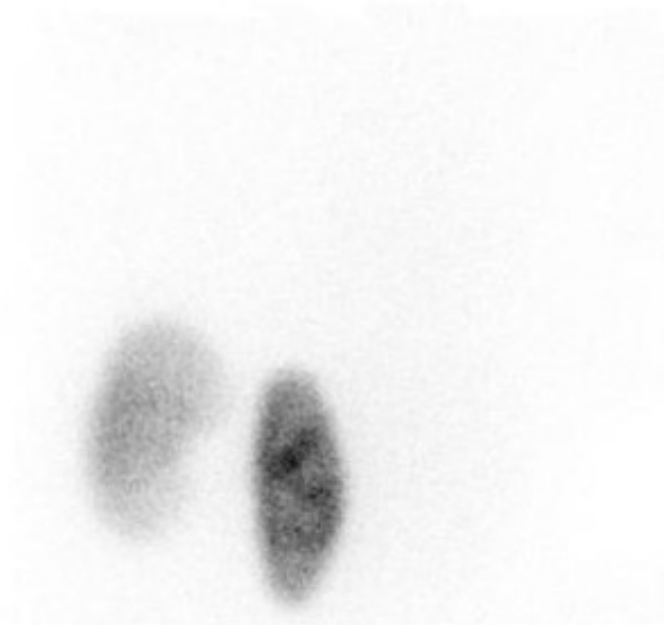
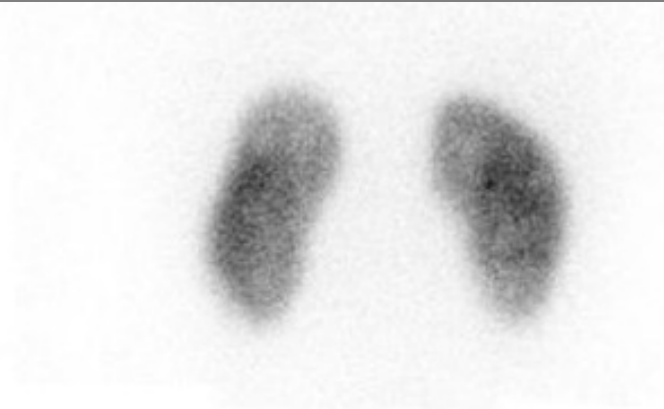




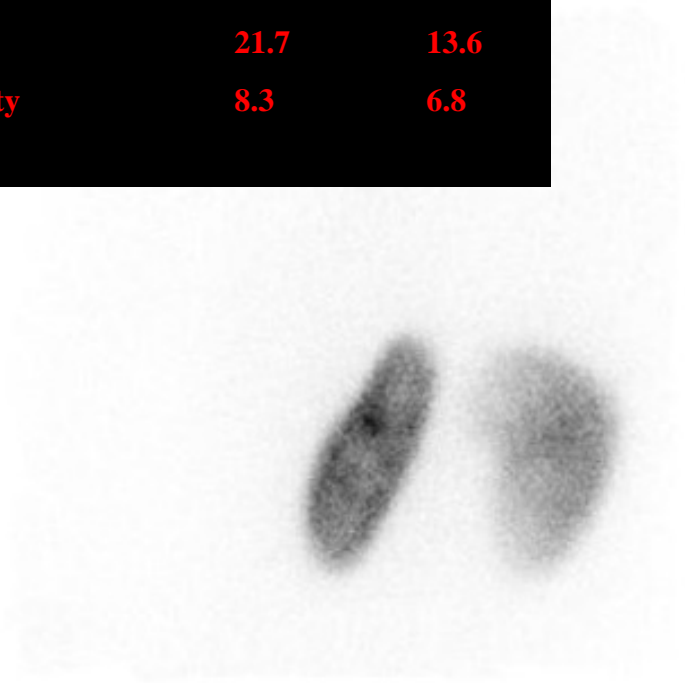
CASE A12



CASE A12



	Left	Right
Normal	48.3	69.5
Abnormal	21.7	10.2
Equivocal	21.7	13.6
Poor quality	8.3	6.8



CASE A13



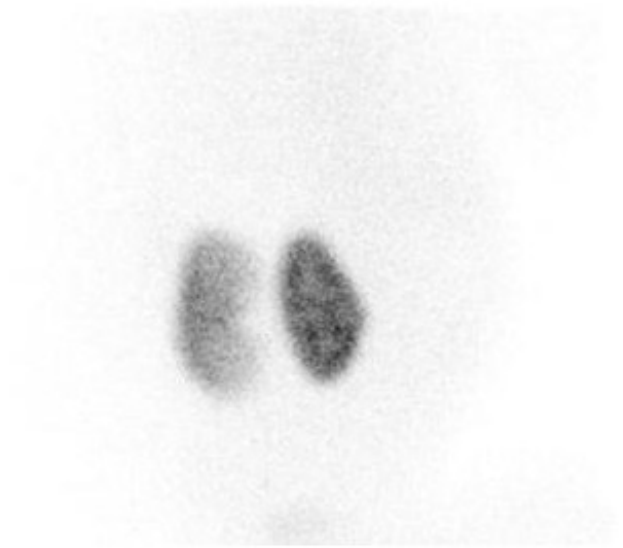


CASE A13

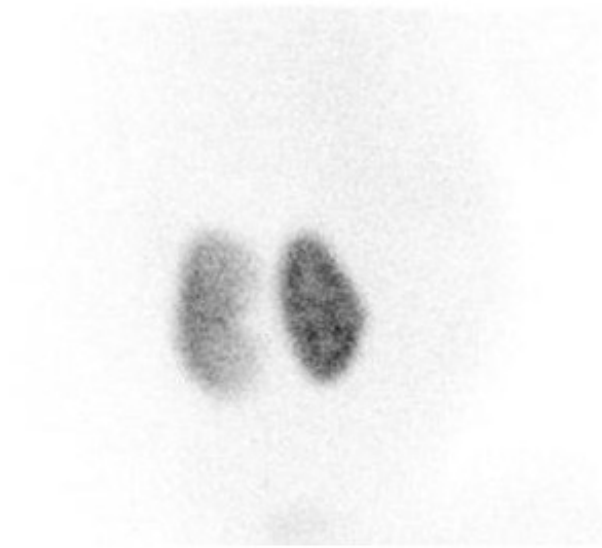
	Left	Right
Normal	96.7	98.4
Abnormal	0.0	0.0
Equivocal	3.3	1.6
Poor quality	0.0	0.0



CASE A14

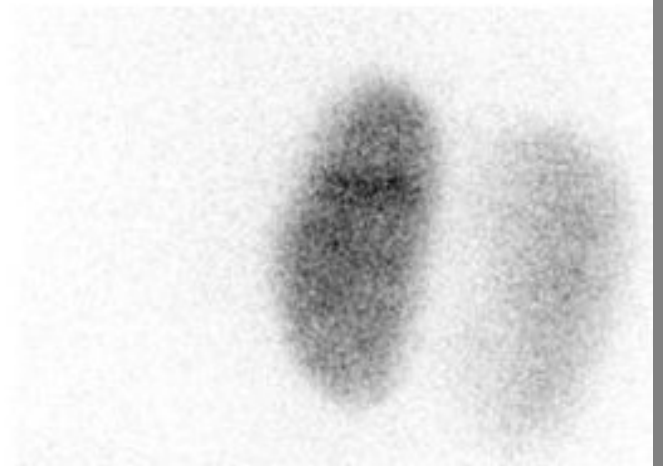
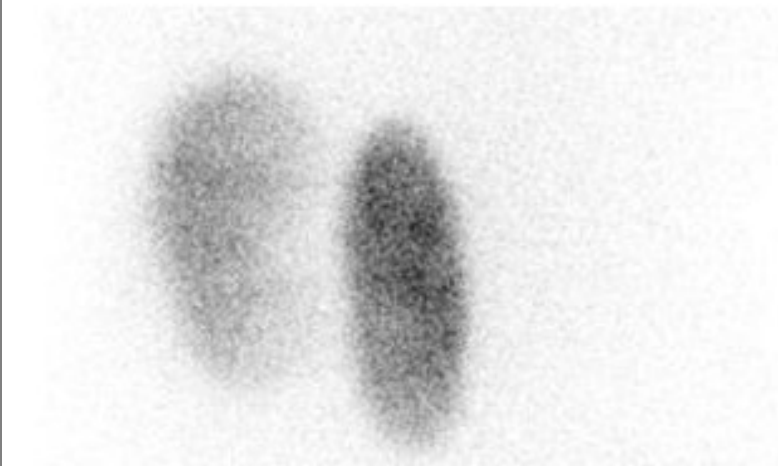


CASE A14



	Left	Right
Normal	98.4	98.4
Abnormal	0.0	0.0
Equivocal	1.6	1.6
Poor quality	0.0	0.0

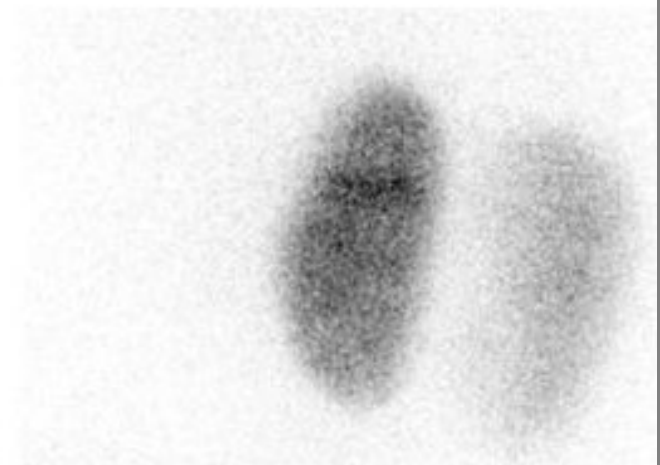
CASE A15



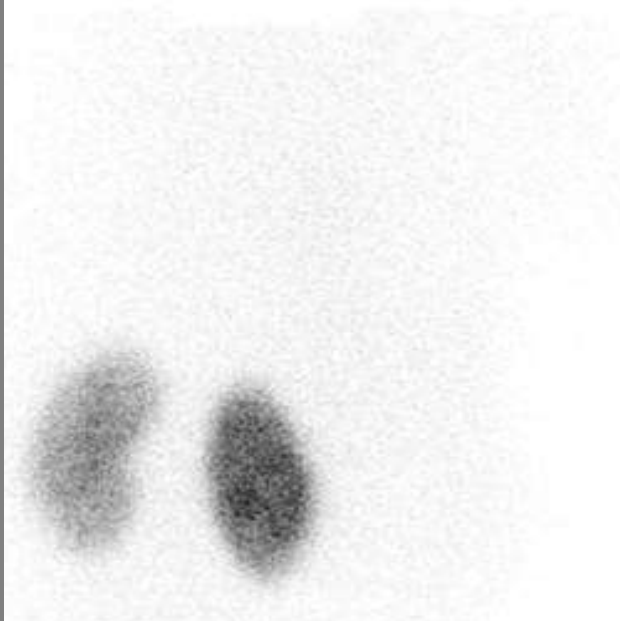
CASE A15



	Left	Right
Normal	78.3	78.3
Abnormal	5.0	1.7
Equivocal	5.0	8.3
Poor quality	11.7	11.7



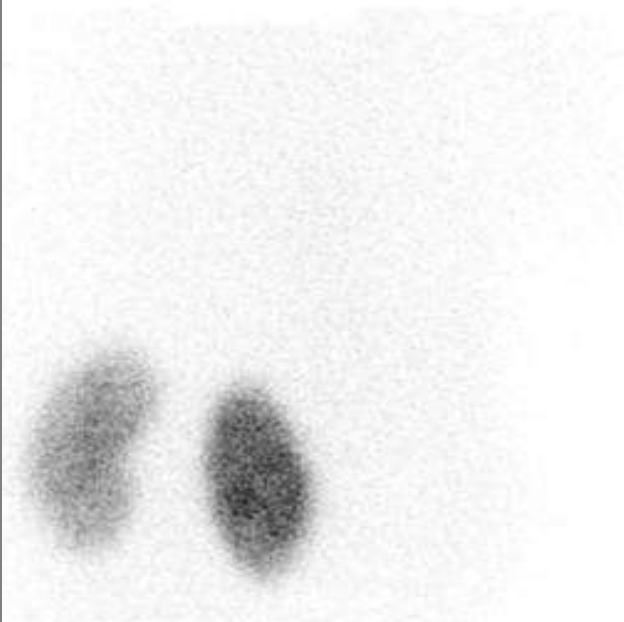
CASE A16



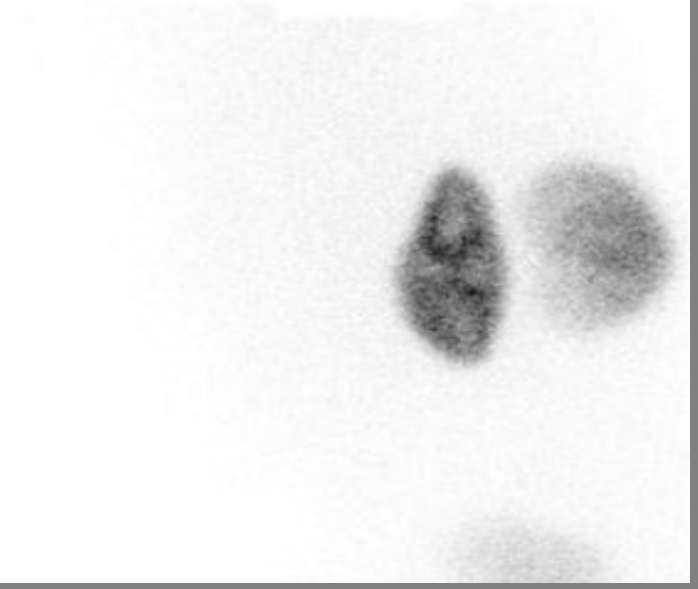
CASE A16



	Left	Right
Normal	93.3	85.2
Abnormal	1.7	4.9
Equivocal	0.0	4.9
Poor quality	5.0	4.9



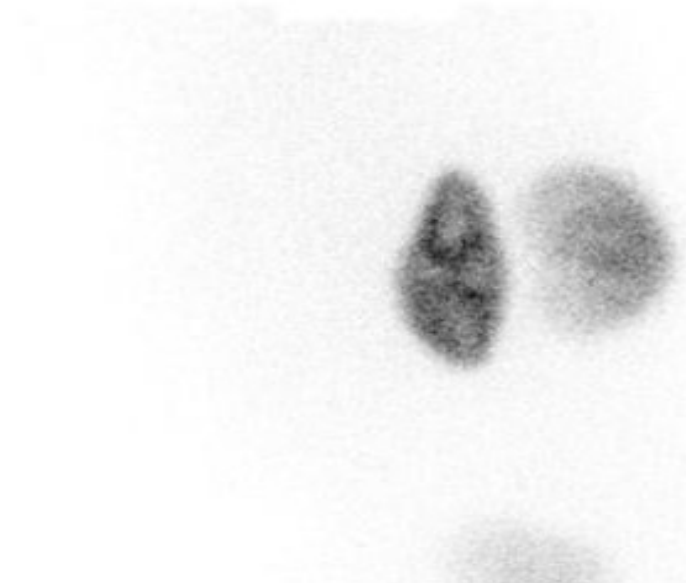
CASE A17



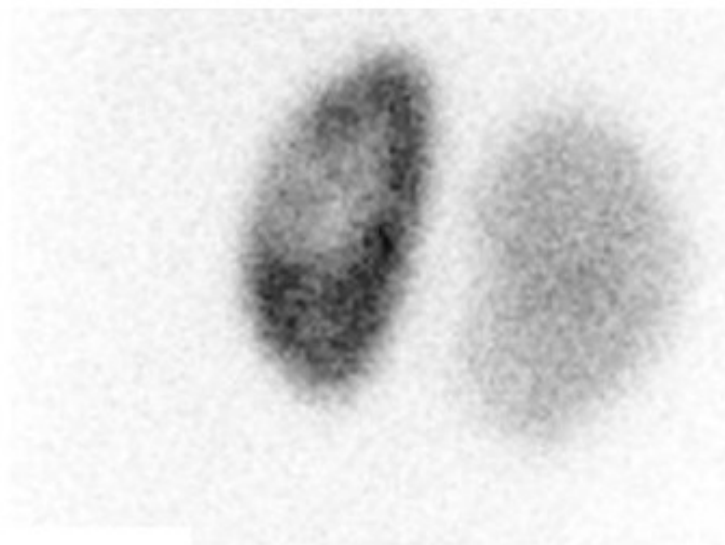
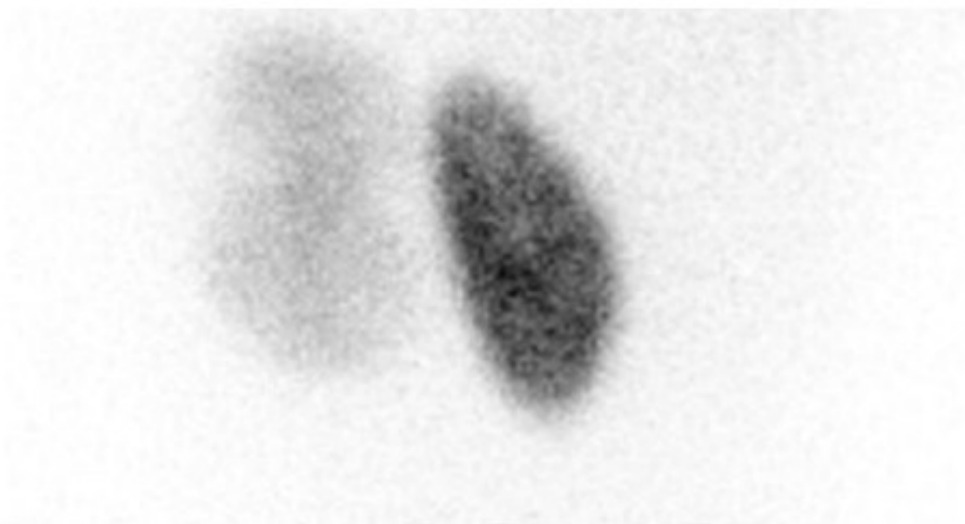
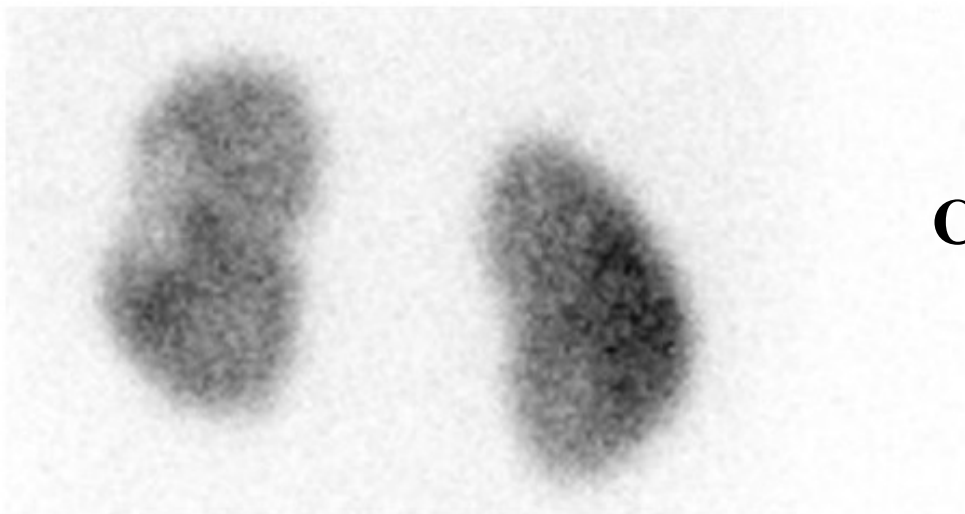
CASE A17



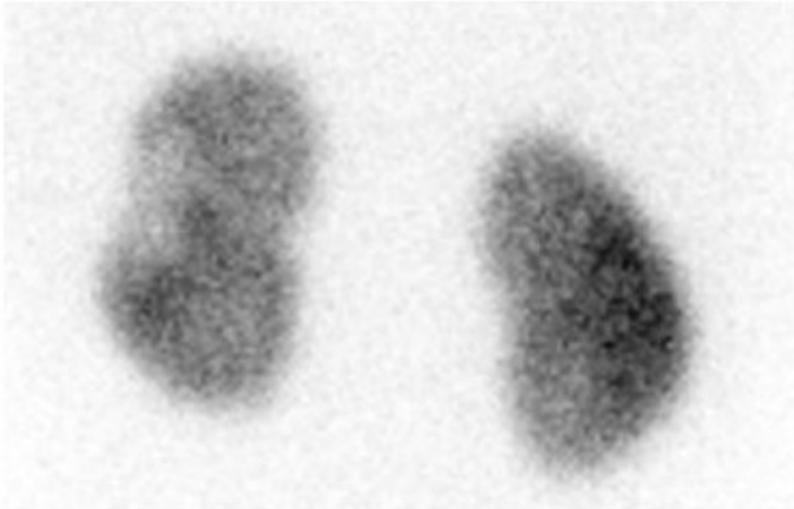
	Left	Right
Normal	75.4	78.7
Abnormal	9.8	8.2
Equivocal	13.1	11.5
Poor quality	1.6	1.6



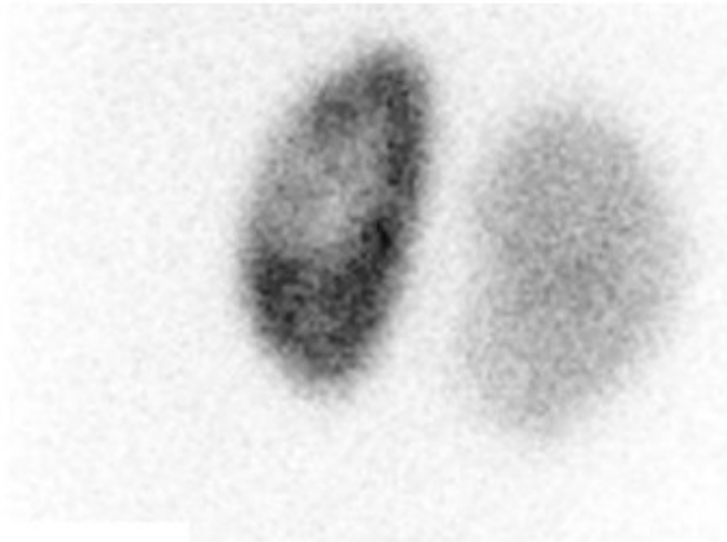
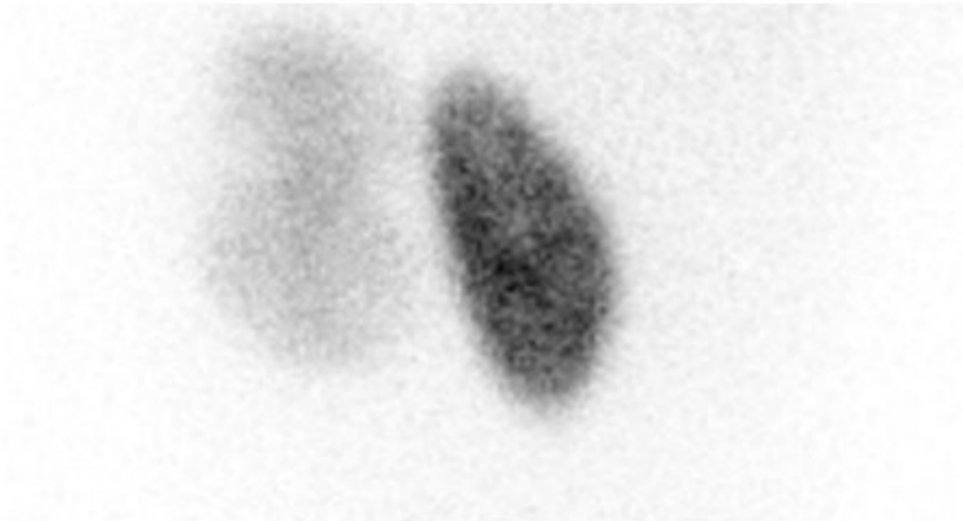
CASE A18



CASE A18

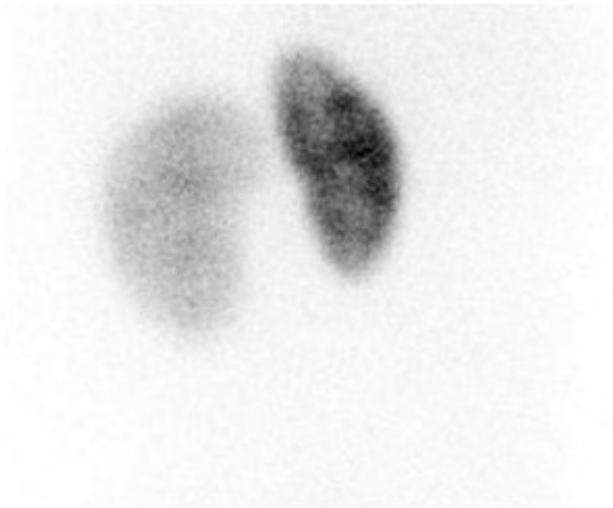


	Left	Right
Normal	0.0	93.4
Abnormal	100.0	1.6
Equivocal	0.0	4.9
Poor quality	0.0	0.0





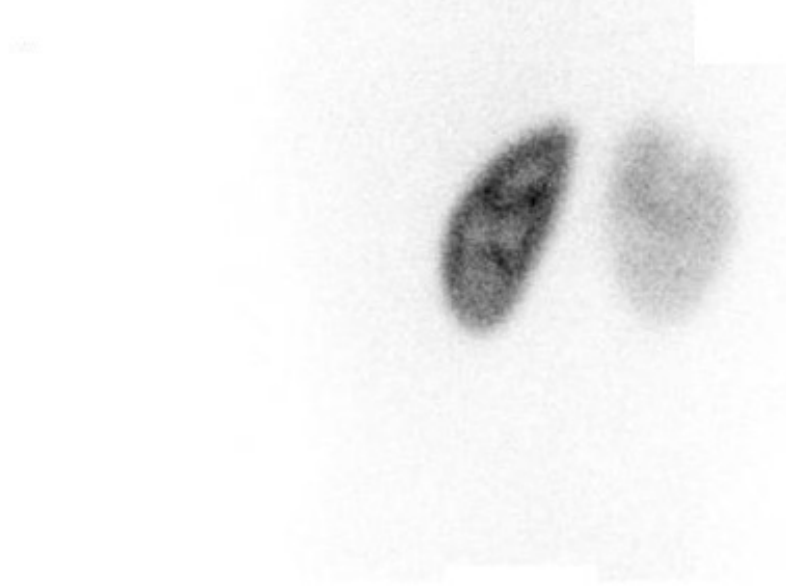
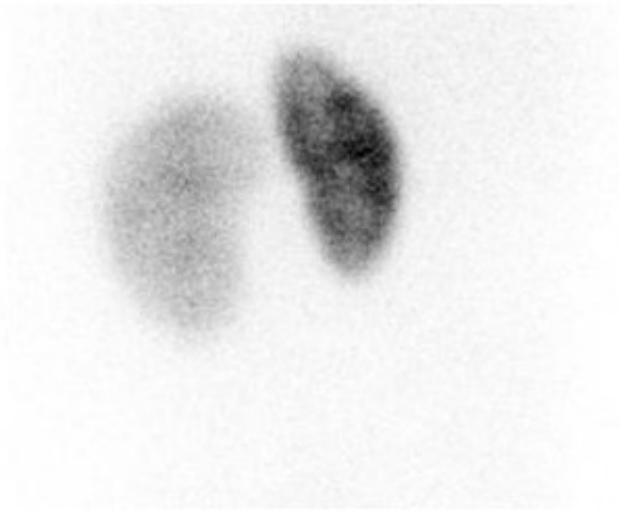
CASE A19



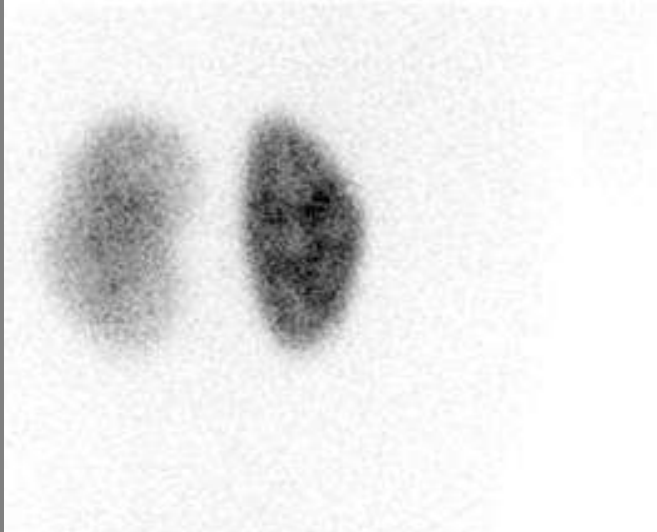


CASE A19

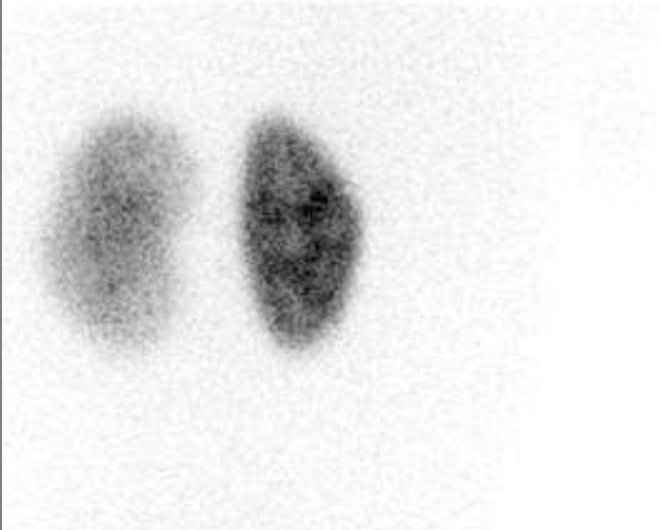
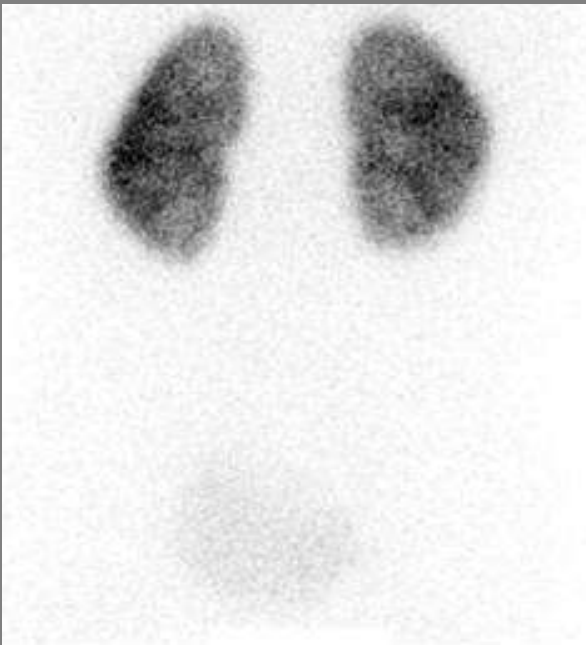
	Left	Right
Normal	88.3	13.1
Abnormal	6.7	70.5
Equivocal	3.3	14.8
Poor quality	1.7	1.6



CASE A20



CASE A20



	Left	Right
Normal	93.4	94.1
Abnormal	1.6	3.9
Equivocal	3.3	2.0
Poor quality	1.6	0.0

LPO



POST



RPO



CASE B1

CASE B1

LPO



POST



RPO



	Left	Right
Normal	37.7	85.0
Abnormal	32.8	1.7
Equivocal	21.3	6.7
Poor quality	8.2	6.7



LPO



ANT



POST



RPO

CASE B2

CASE B2



LPO



ANT



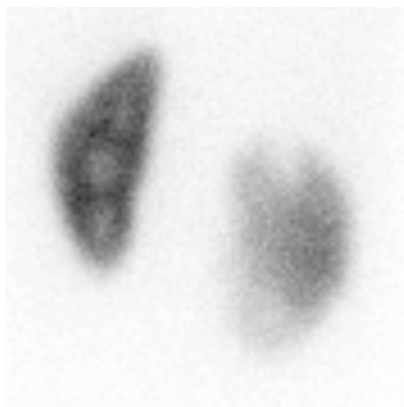
POST



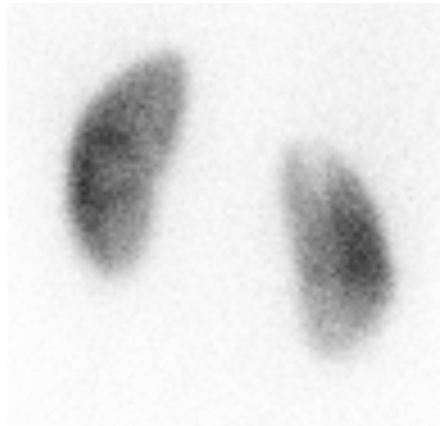
RPO

	Left	Right
Normal	3.3	95.0
Abnormal	83.6	1.7
Equivocal	11.5	3.3
Poor quality	1.6	0.0

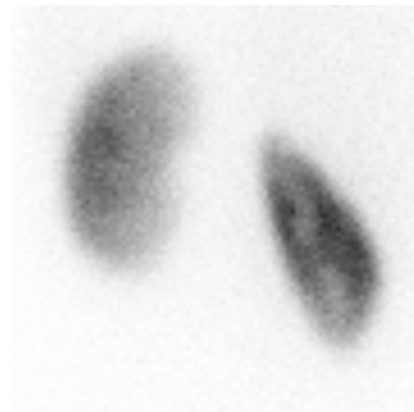
LPO



POST



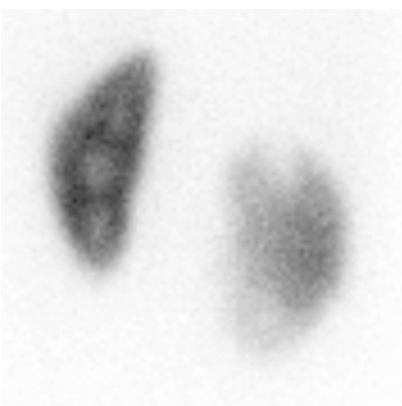
RPO



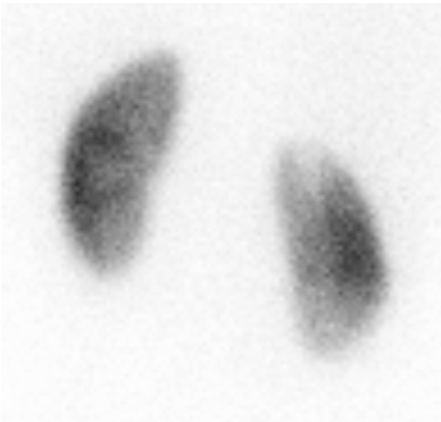
CASE B3

CASE B3

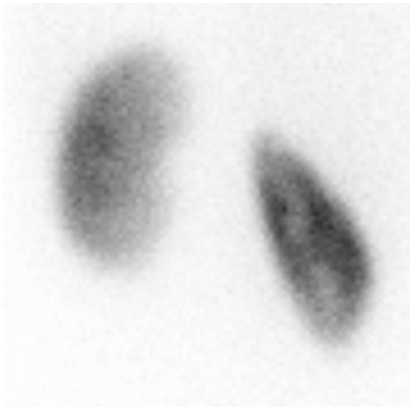
LPO



POST

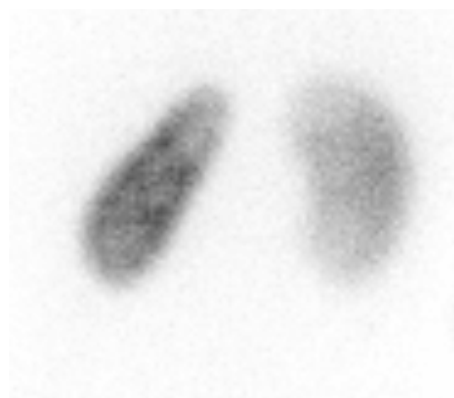


RPO

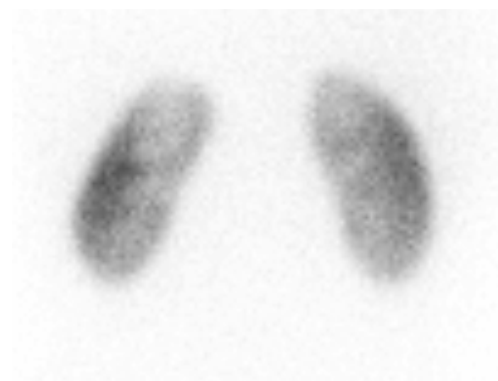


	Left	Right
Normal	96.7	4.9
Abnormal	1.7	90.2
Equivocal	1.7	4.9
Poor quality	0.0	0.0

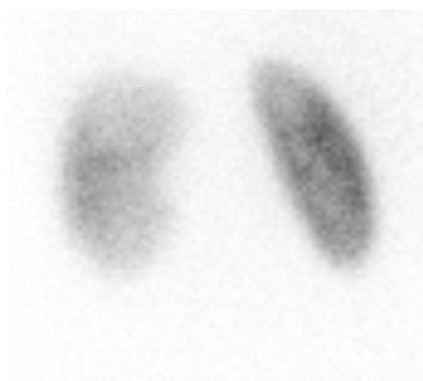
LPO



POST



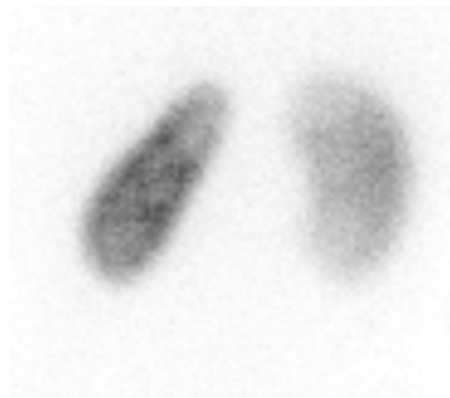
RPO



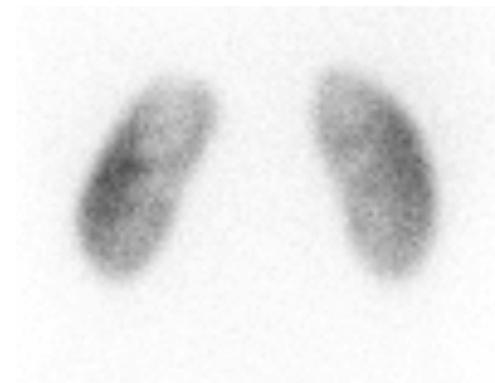
CASE B4

CASE B4

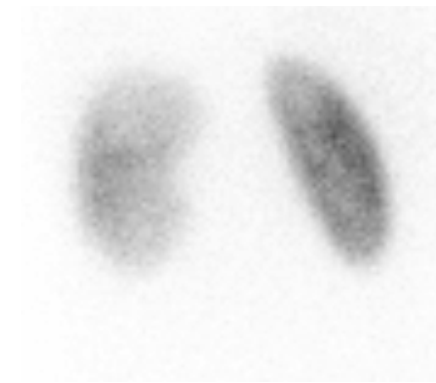
LPO



POST



RPO



	Left	Right
Normal	24.6	80.3
Abnormal	49.2	11.5
Equivocal	26.2	8.2
Poor quality	0.0	0.0

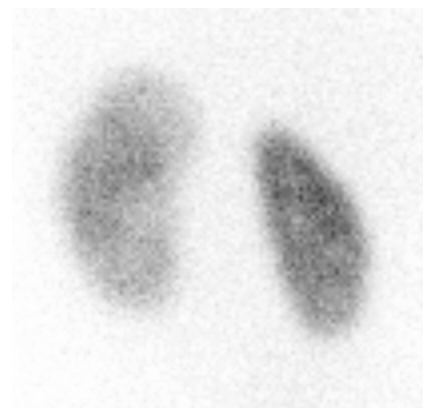
LPO



POST



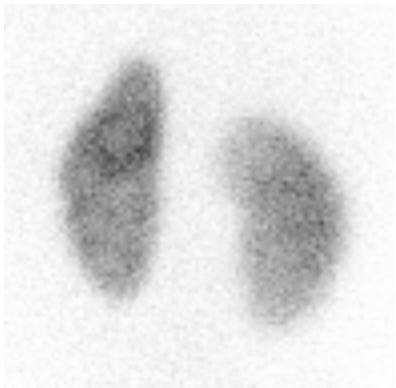
RPO



CASE B5

CASE B5

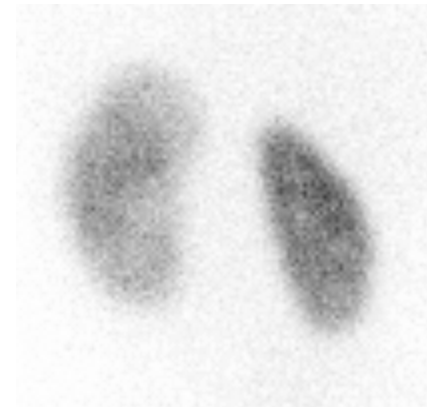
LPO



POST

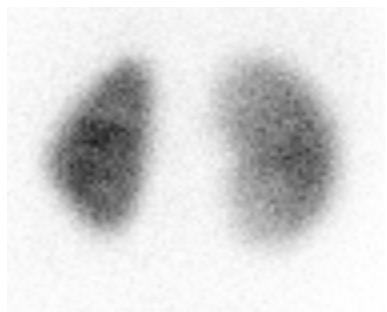


RPO

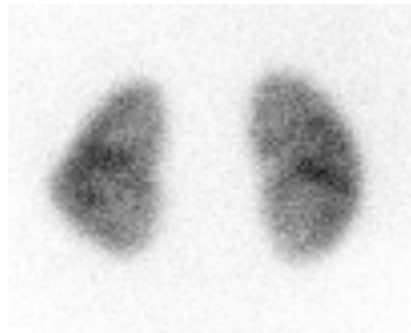


	Left	Right
Normal	73.2	95.1
Abnormal	13.1	0.0
Equivocal	8.2	0.0
Poor quality	4.9	4.9

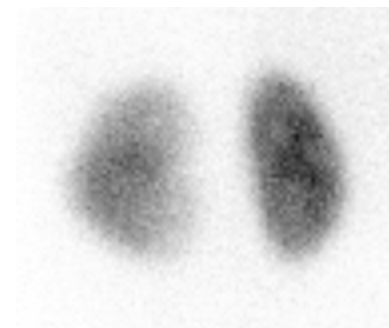
LPO



POST



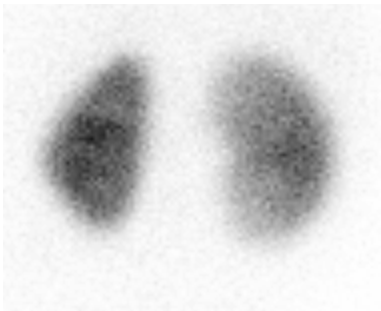
RPO



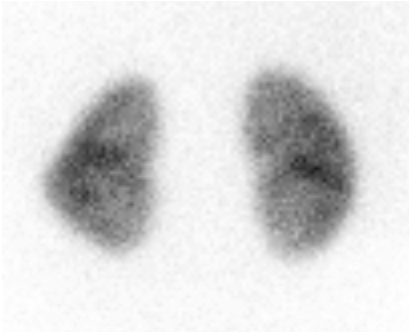
CASE B6

CASE B6

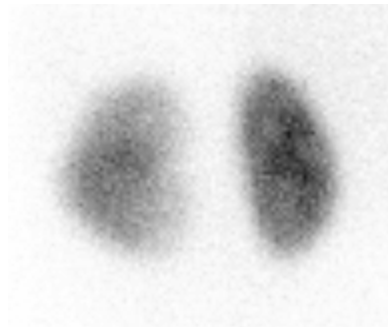
LPO



POST



RPO

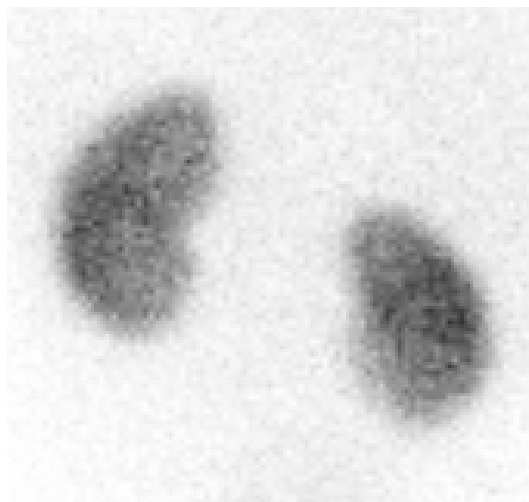


	Left	Right
Normal	95.1	90.2
Abnormal	3.3	1.6
Equivocal	0.0	4.9
Poor quality	1.6	3.3

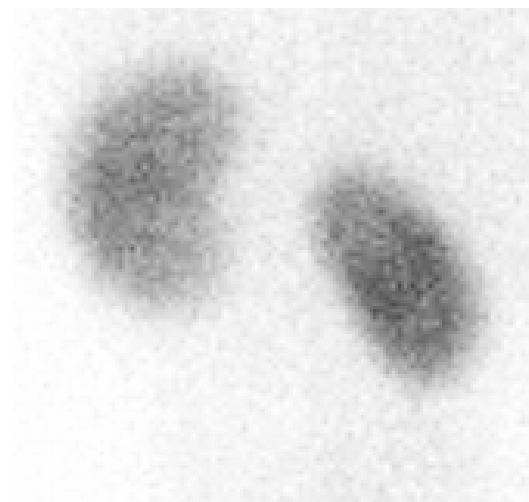
LPO



POST



RPO



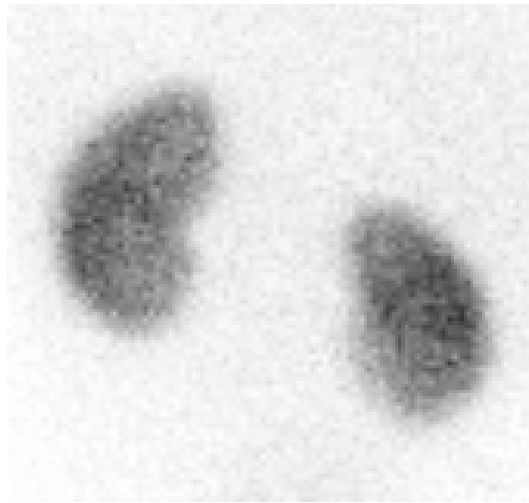
CASE B7

CASE B7

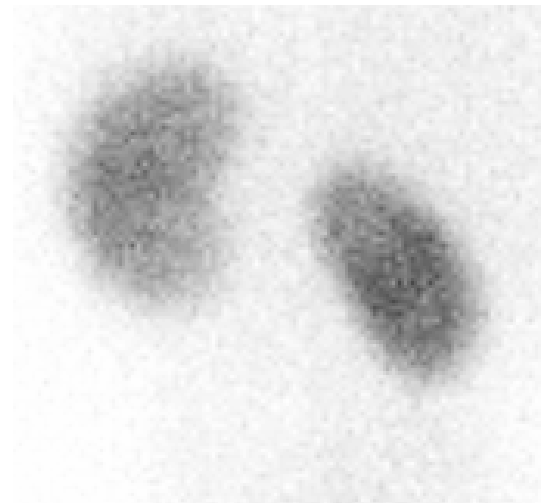
LPO



POST

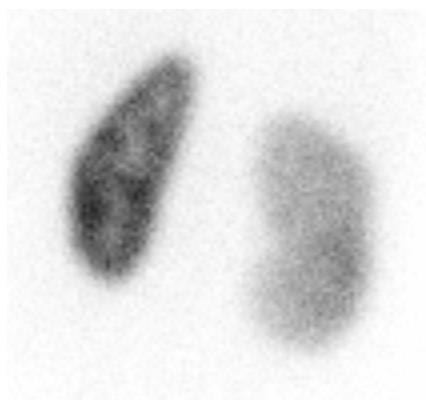


RPO

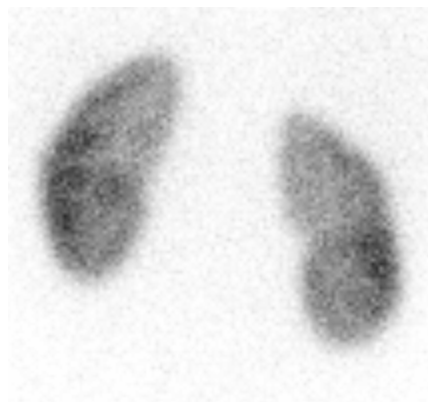


	Left	Right
Normal	68.9	53.3
Abnormal	0.0	3.3
Equivocal	0.0	8.3
Poor quality	31.1	35.0

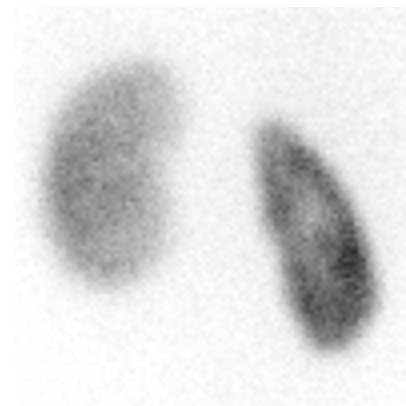
LPO



POST



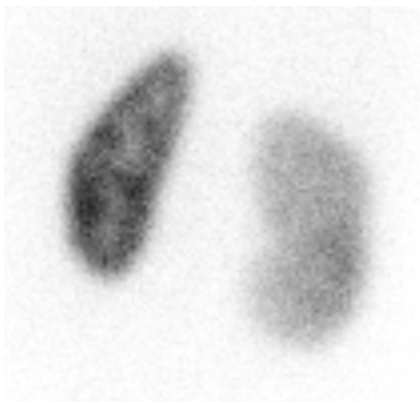
RPO



CASE B8

CASE B8

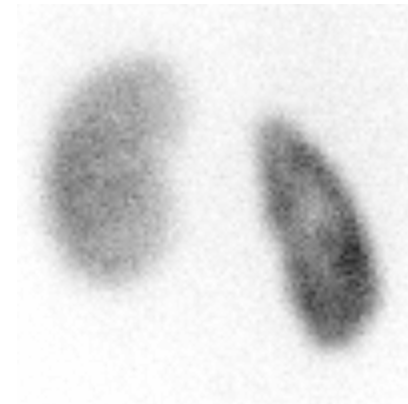
LPO



POST



RPO



	Left	Right
Normal	100.0	50.8
Abnormal	0.0	31.1
Equivocal	0.0	16.4
Poor quality	0.0	1.6

LPO



POST



RPO



CASE B9

CASE B9

LPO



POST

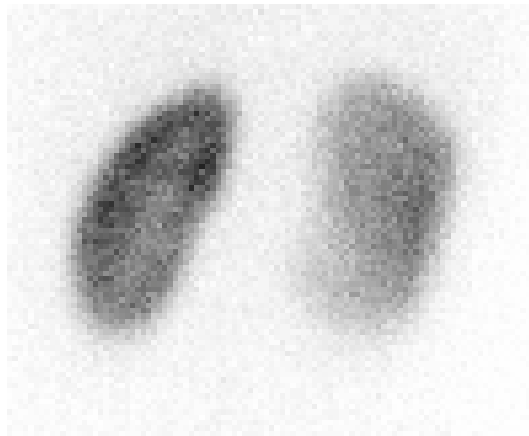


RPO



	Left	Right
Normal	96.7	98.4
Abnormal	0.0	0.0
Equivocal	1.6	0.0
Poor quality	1.6	1.6

LPO



POST



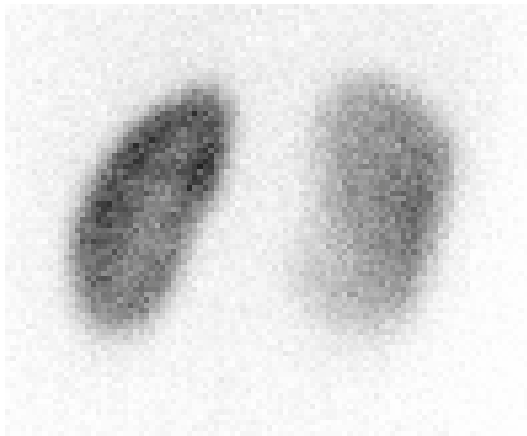
RPO



CASE B10

CASE B10

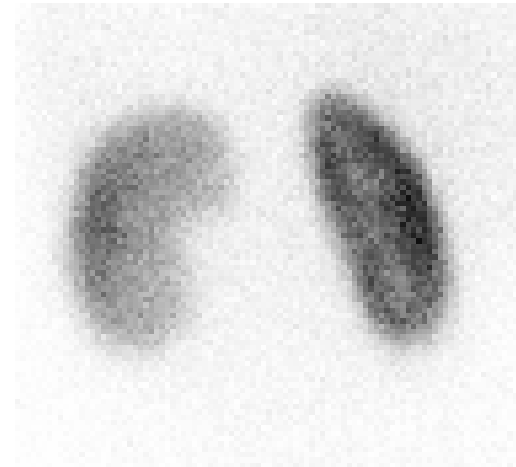
LPO



POST

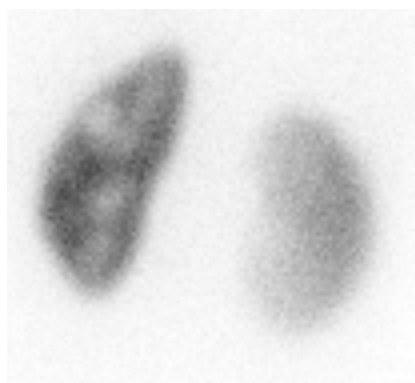


RPO

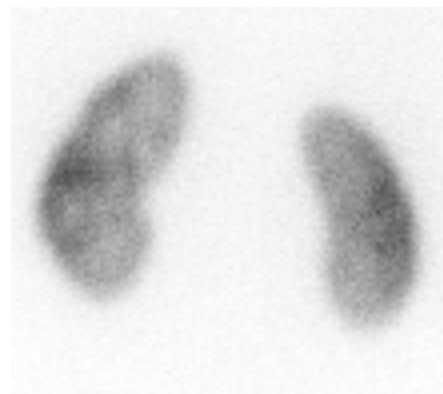


	Left	Right
Normal	98.4	82.0
Abnormal	0.0	8.2
Equivocal	0.0	8.2
Poor quality	1.6	1.6

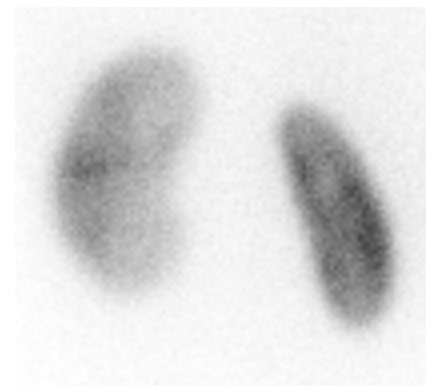
LPO



POST



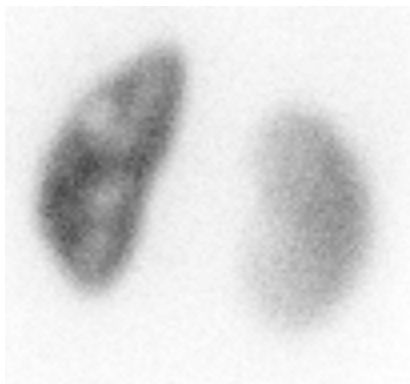
RPO



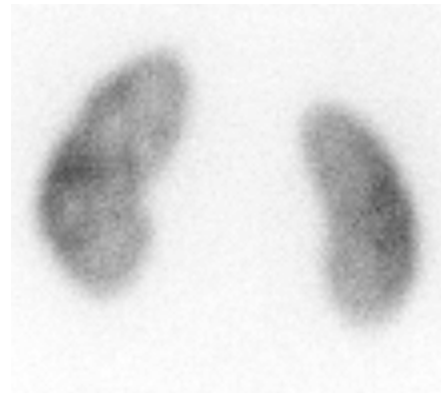
CASE B11

CASE B11

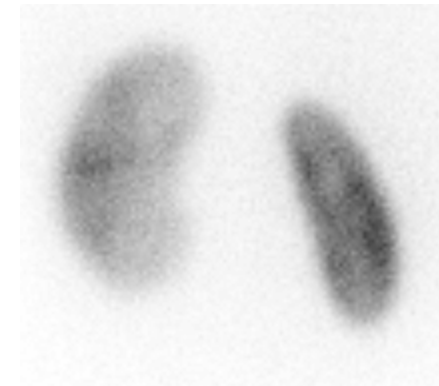
LPO



POST



RPO

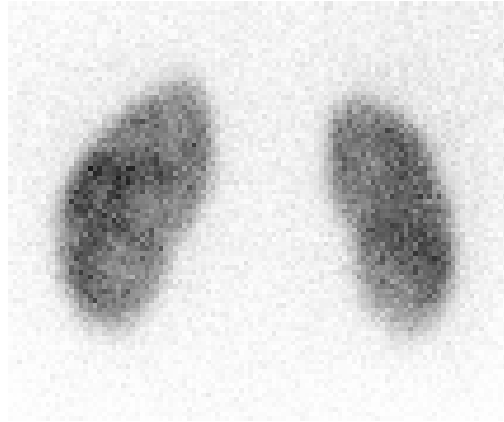


	Left	Right
Normal	26.2	88.5
Abnormal	57.4	4.9
Equivocal	16.4	6.6
Poor quality	0.0	0.0

LPO



POST



RPO



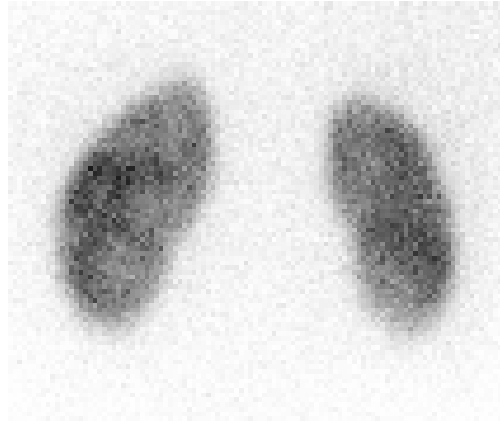
CASE B12

CASE B12

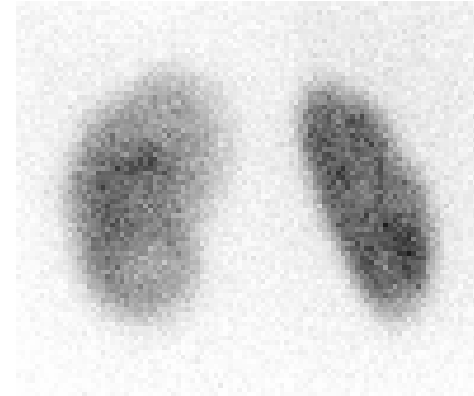
LPO



POST



RPO



	Left	Right
Normal	23.0	72.1
Abnormal	54.1	11.5
Equivocal	23.0	16.4
Poor quality	0.0	0.0





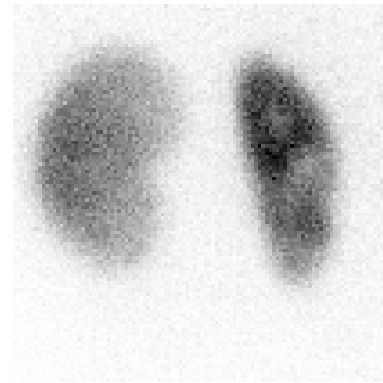
CASE B14



LPO



POST



RPO

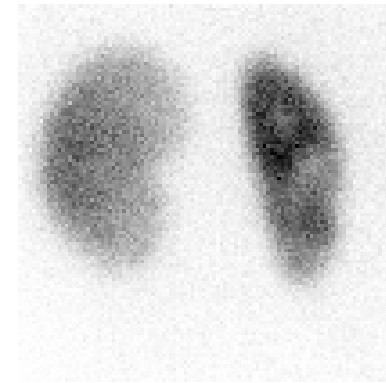
CASE B14



LPO



POST



RPO

	Left	Right
Normal	96.7	3.3
Abnormal	1.6	96.7
Equivocal	1.6	0.0
Poor quality	0.0	0.0





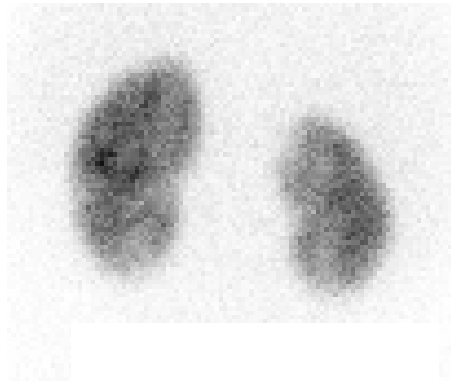




CASE B 17



LPO



POST



RPO

CASE B 17



LPO

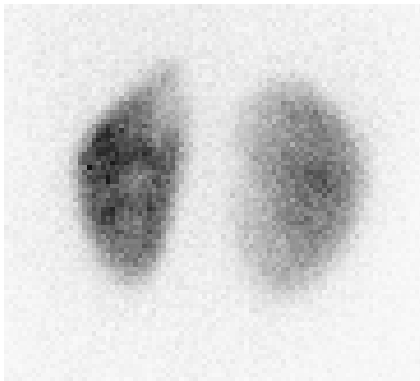
POST

RPO

	Left	Right
Normal	9.8	13.1
Abnormal	73.8	82.0
Equivocal	14.8	4.9
Poor quality	1.6	0.0

CASE B 18

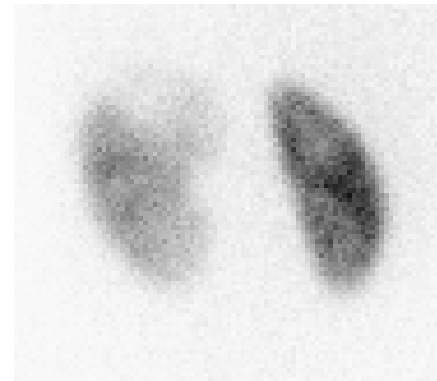
L.P.O.



POST

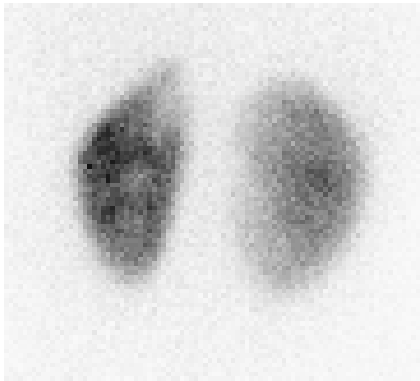


R.P.O.



CASE B 18

L.P.O.



POST



R.P.O.



	Left	Right
Normal	1.9	90.2
Abnormal	98.4	3.3
Equivocal	0.0	6.6
Poor quality	0.0	0.0

L.P.O.

POST

R.P.O.



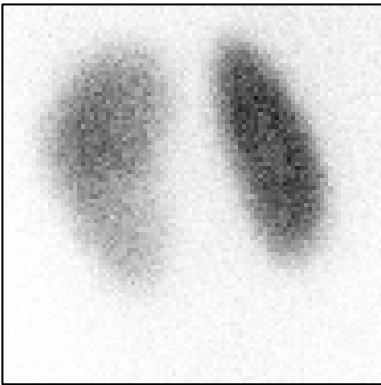
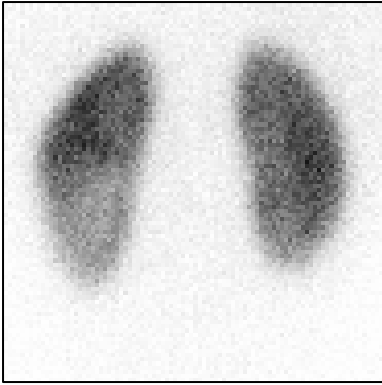
CASE B19

CASE B19



	Left	Right
Normal	0.0	96.7
Abnormal	98.4	0.0
Equivocal	1.6	3.3
Poor quality	0.0	0.0

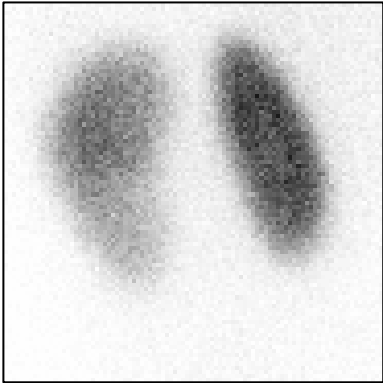
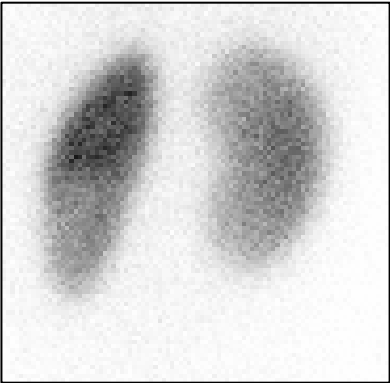
L.P.O. **POST** **R.P.O**



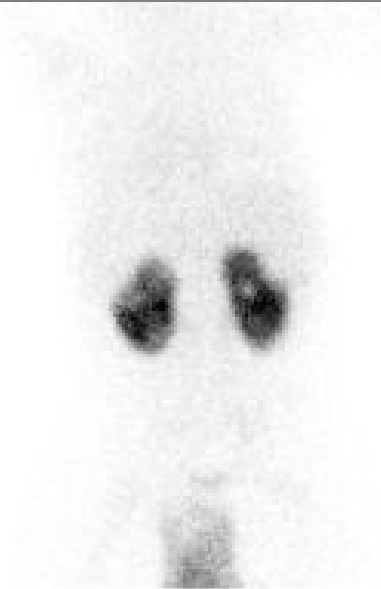
CASE B20

CASE B20

L.P.O. **POST** **R.P.O.**



	Left	Right
Normal	15.0	93.3
Abnormal	60.0	1.7
Equivocal	23.3	3.3
Poor quality	1.7	1.7

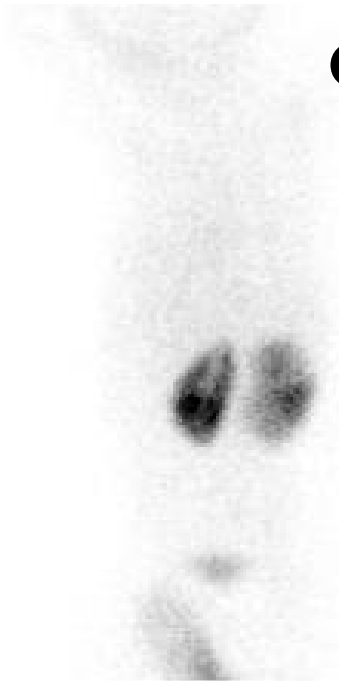


POST Z1.88



Z 2.88

CASE C1

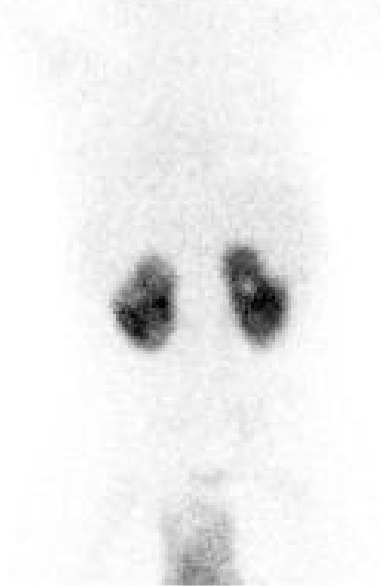


QP6

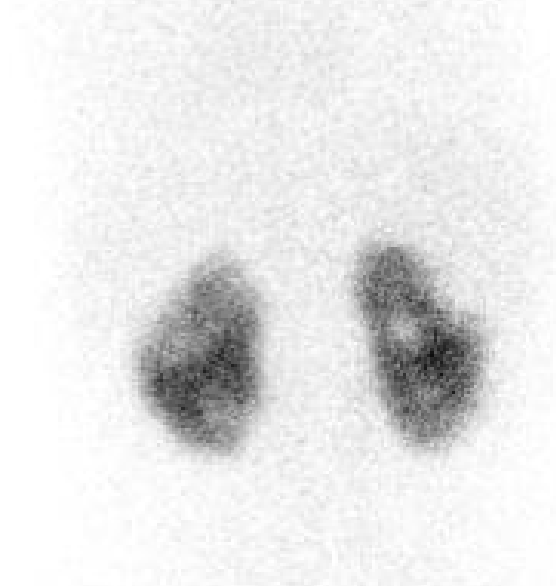


QP6

CASE C1



POST Z1.88



Z 2.88

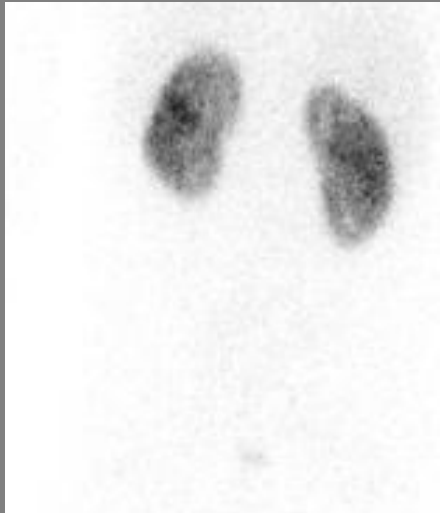
	Left	Right
Normal	3.3	3.3
Abnormal	95.0	95.0
Equivocal	1.7	1.7
Poor quality	0.0	0.0



QF6



QF6



POST 21.38



POST 22.0

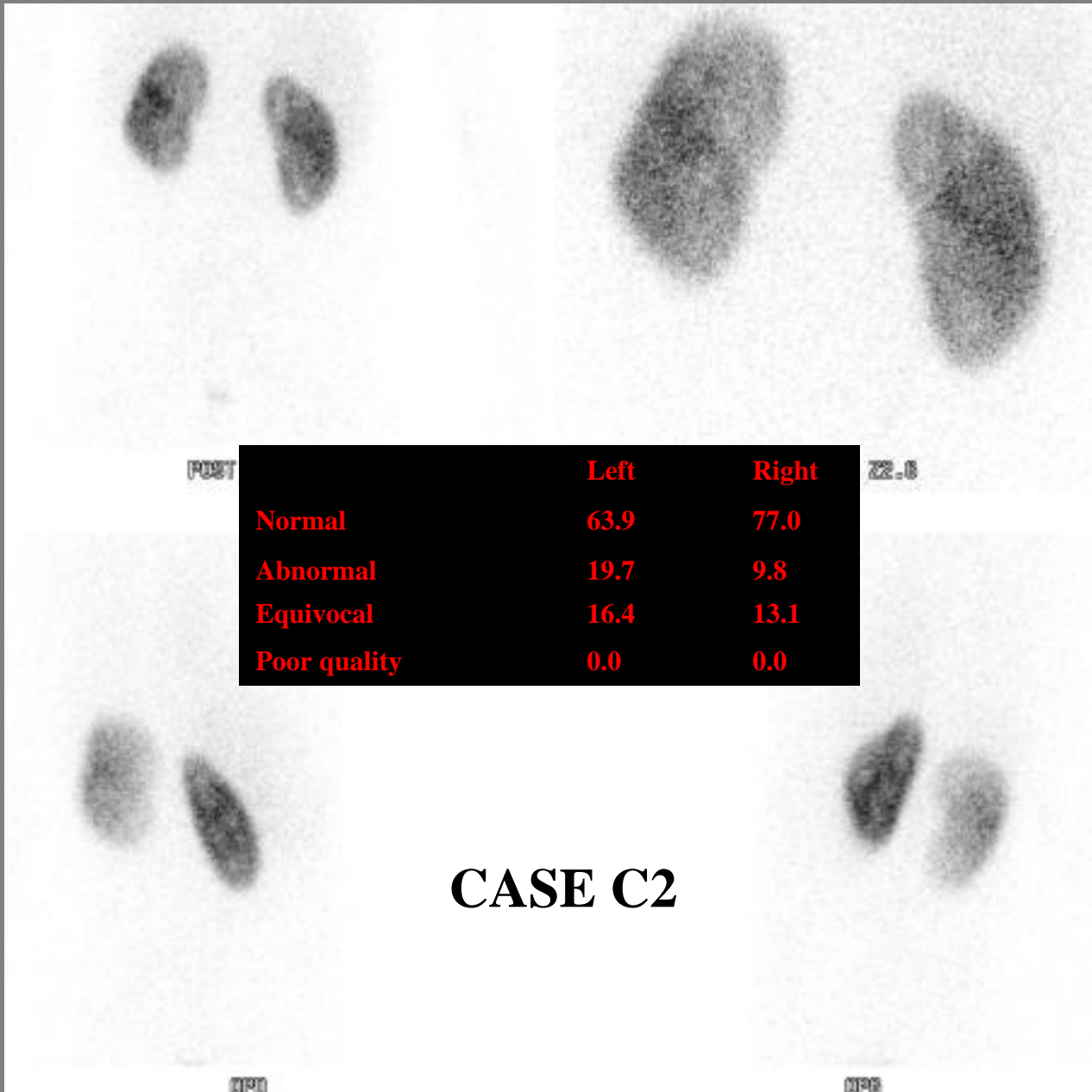
CASE C2



0.00



0.00

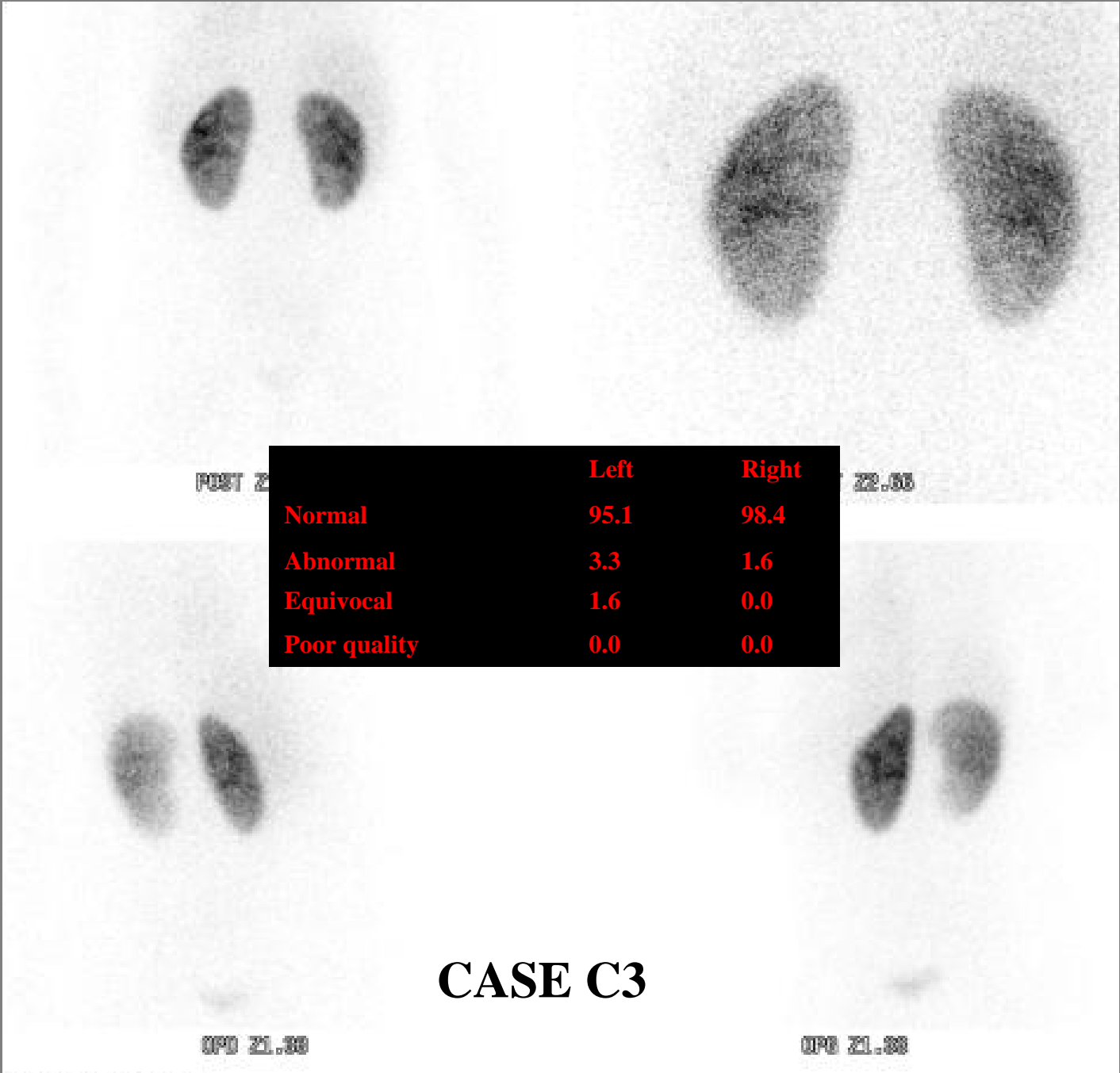


CASE C2



CASE C3





CASE C3

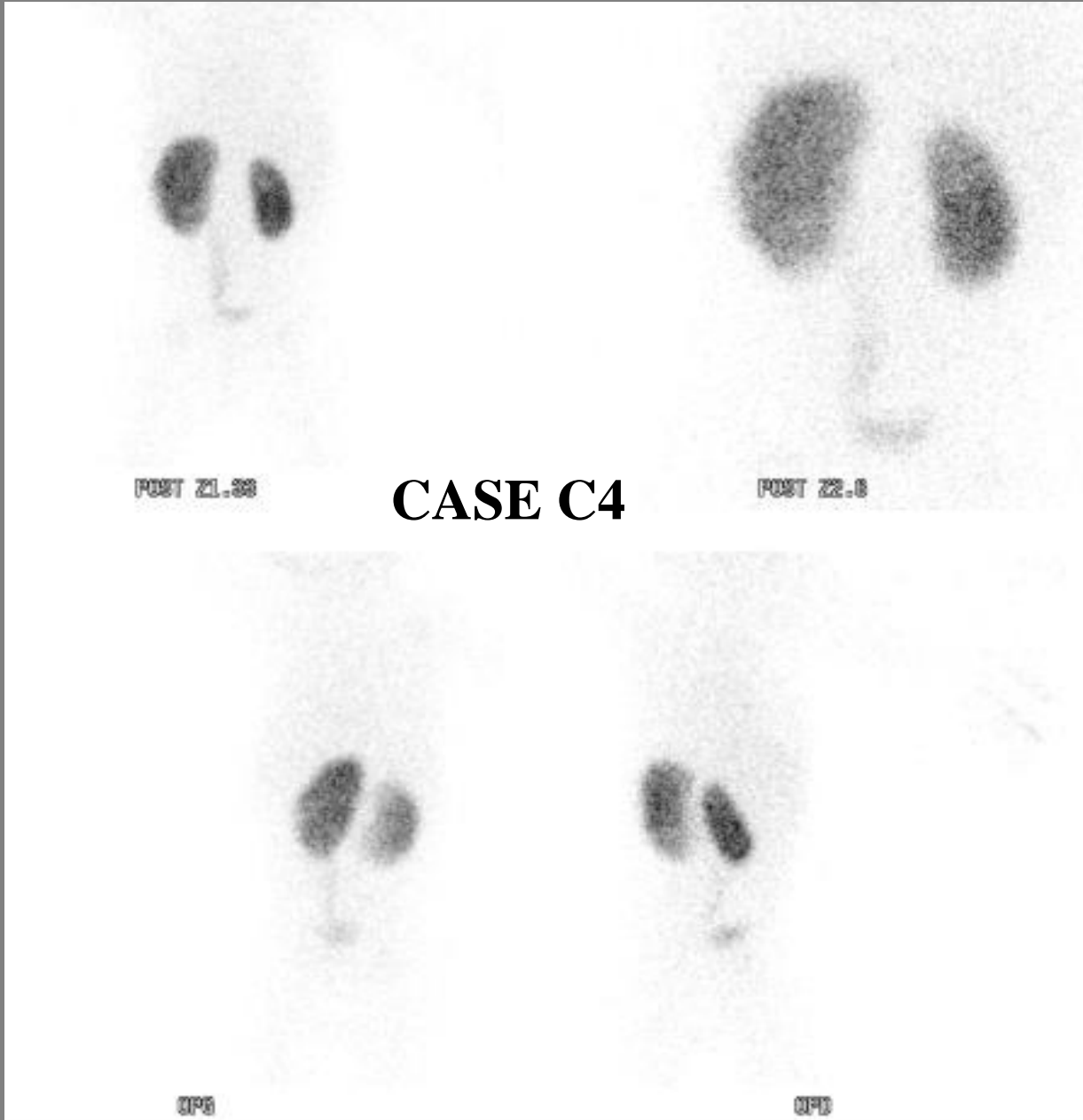
POST Z1-88

CASE C4

POST Z2-8

CP6

CP6



CASE C4

POST Z1-88

POST Z2-8

	Left	Right
Normal	45.8	56.7
Abnormal	16.9	16.7
Equivocal	15.3	13.3
Poor quality	22.0	13.3

CP6

CP6



POST 21.00



POST 22

CASE C5



0120



0125

CASE C5

POST 21.8

Left

Right

Normal

80.3

95.1

Abnormal

9.8

0.0

Equivocal

9.8

4.9

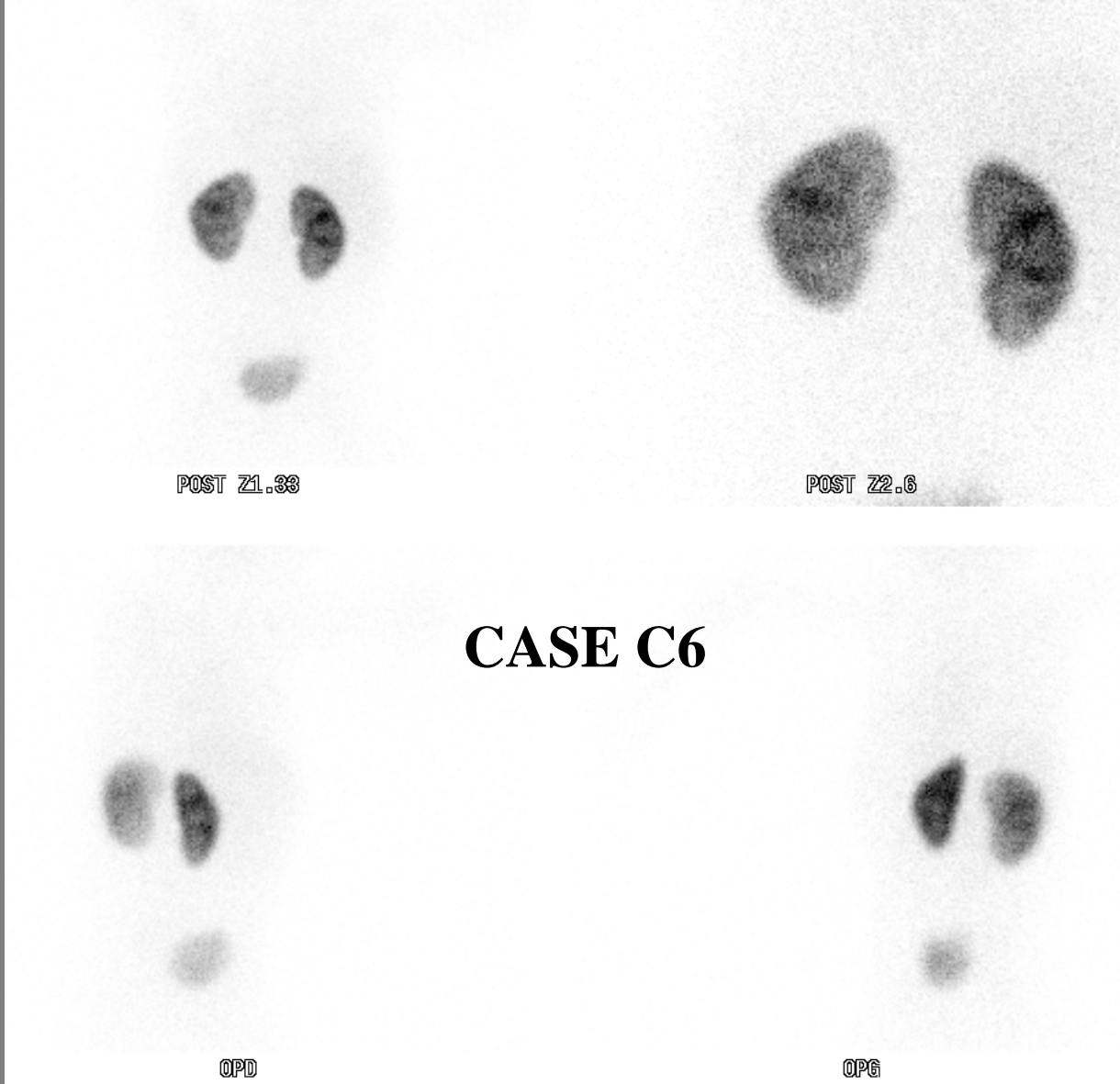
Poor quality

0.0

0.0

0121

0121



POST Z1.33

POST Z2.6

CASE C6

OPD

OPG

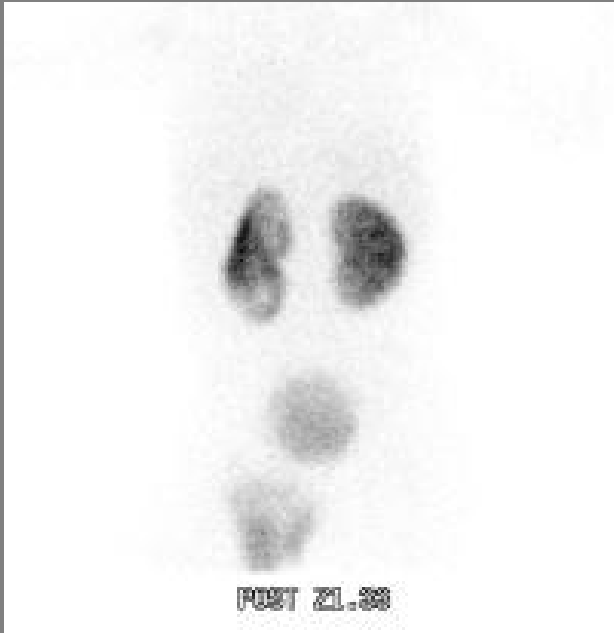
CASE C6

POST Z

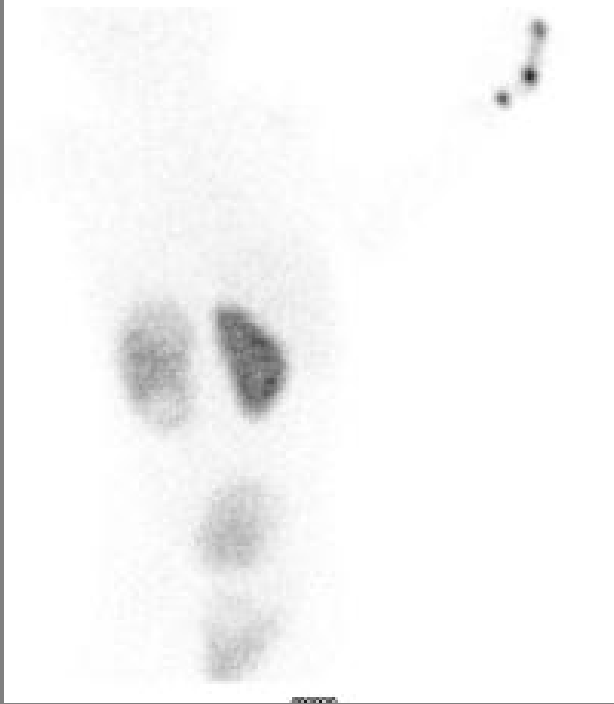
	Left	Right
Normal	95.1	88.5
Abnormal	0.0	1.6
Equivocal	4.9	9.8
Poor quality	0.0	0.0

OPD

OPG



CASE C7

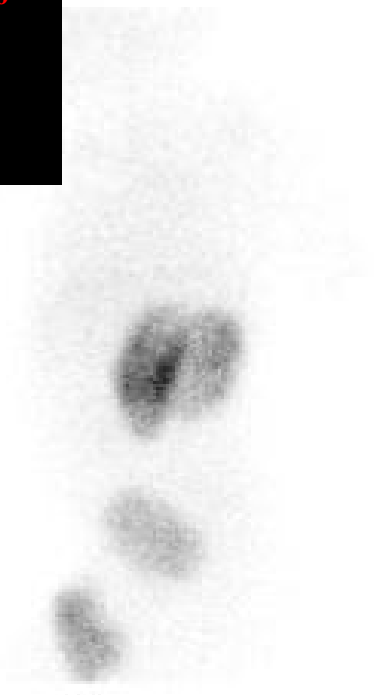


CASE C7

POST Z1

POST Z2

	Left	Right
Normal	6.6	100.0
Abnormal	78.7	0.0
Equivocal	13.1	0.0
Poor quality	1.6	0.0





POST 21.38

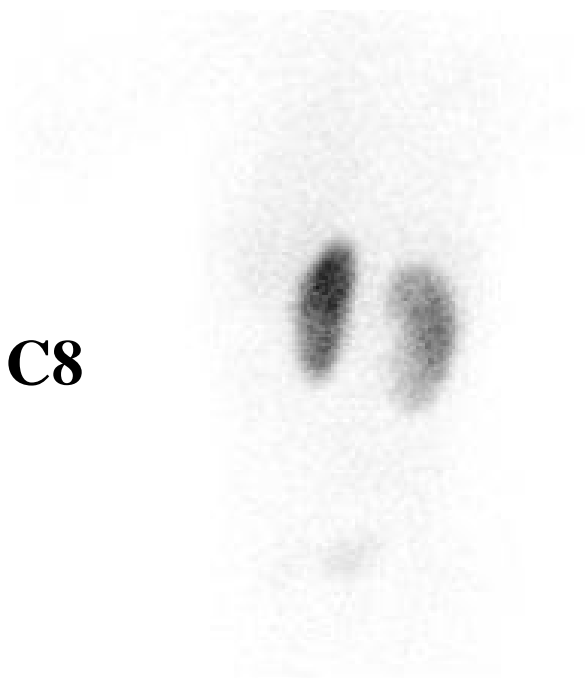


POST 22.38



0190

CASE C8



0190

CASE C8

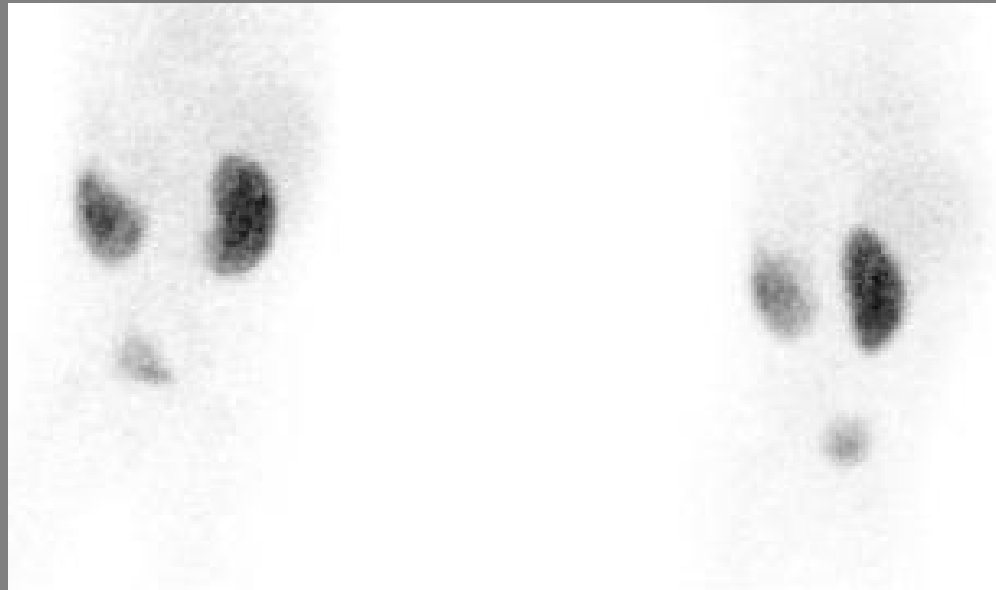
POST 21.00

POST 22.00

	Left	Right
Normal	62.3	67.2
Abnormal	4.9	4.9
Equivocal	16.4	11.5
Poor quality	16.4	16.4

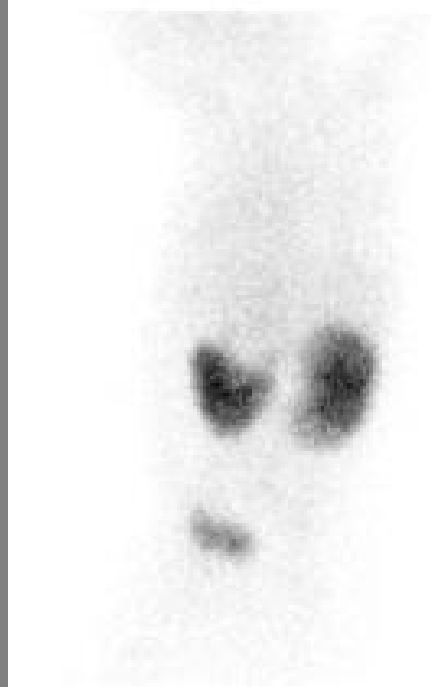
0190

0190



POST 21.00

OPR



OPR

CASE C9

CASE C9

POST ZEL

OPOR

	Left	Right
Normal	0.0	90.0
Abnormal	96.7	3.3
Equivocal	1.6	6.7
Poor quality	1.6	0.0

OPOR



POST 21.88



POST 22.88

CASE C10

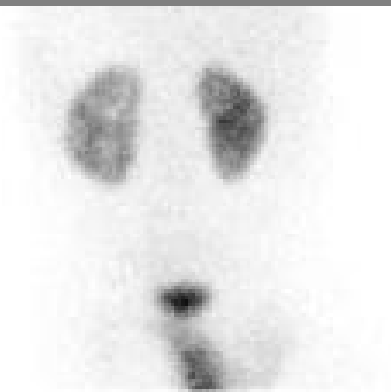


OPB

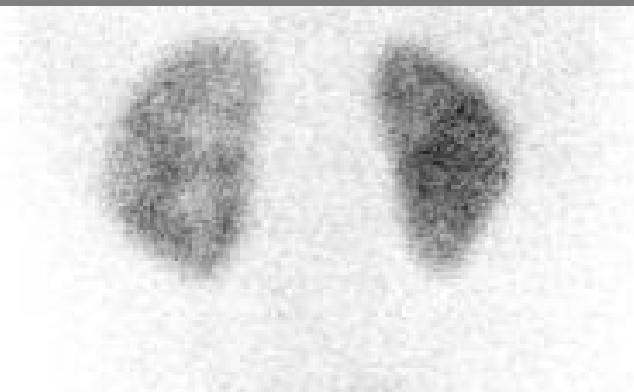


OPB

CASE C10



POST 21.88



POST 22.88



QP0



QP0

	Left	Right
Normal	23.0	90.2
Abnormal	63.9	6.6
Equivocal	11.5	3.3
Poor quality	1.6	0.0



POST 21.88



POST 22.0



POST 22.8



OPD



OPD

CASE C11

CASE C11

POST 21.88

POST 22.8

POST22.8

OPD

OPD

	Left	Right
Normal	91.8	93.4
Abnormal	0.0	0.0
Equivocal	4.9	3.4
Poor quality	3.3	3.3



POST 21.00



POST 22.00

CASE C12



OPD



OPD

CASE C12

POST 22.00

POST 22.00

	Left	Right
Normal	96.7	96.7
Abnormal	1.6	0.0
Equivocal	1.6	3.3
Poor quality	0.0	0.0

CPD

CPD



CASE C13



CASE C13

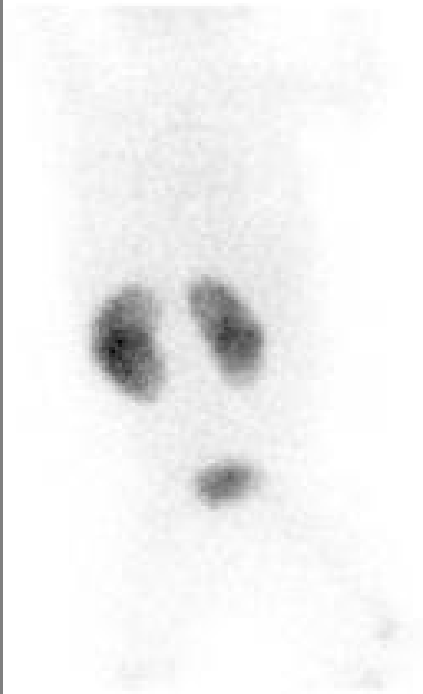
	Left	Right
Normal	60.7	60.7
Abnormal	19.7	11.5
Equivocal	11.5	16.4
Poor quality	8.2	11.5



POST 21.00



POST 22



CPD

CASE C14



CPB

CASE C14



	Left	Right
Normal	60.0	3.3
Abnormal	25.0	91.8
Equivocal	11.7	3.3
Poor quality	3.3	1.6



PO

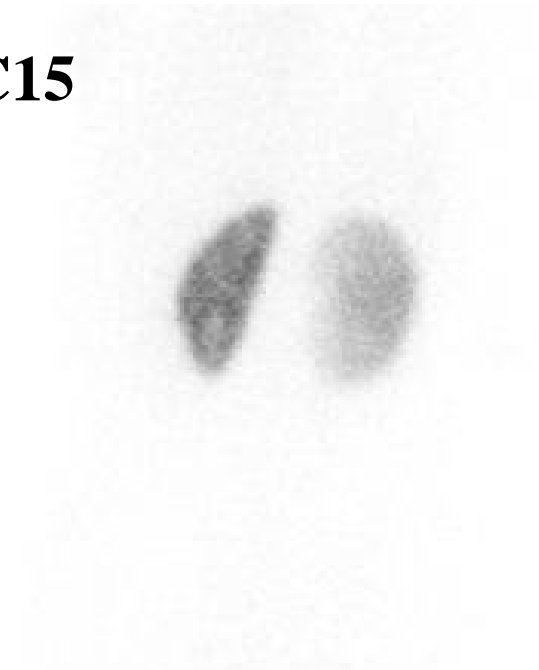


PO

CASE C15

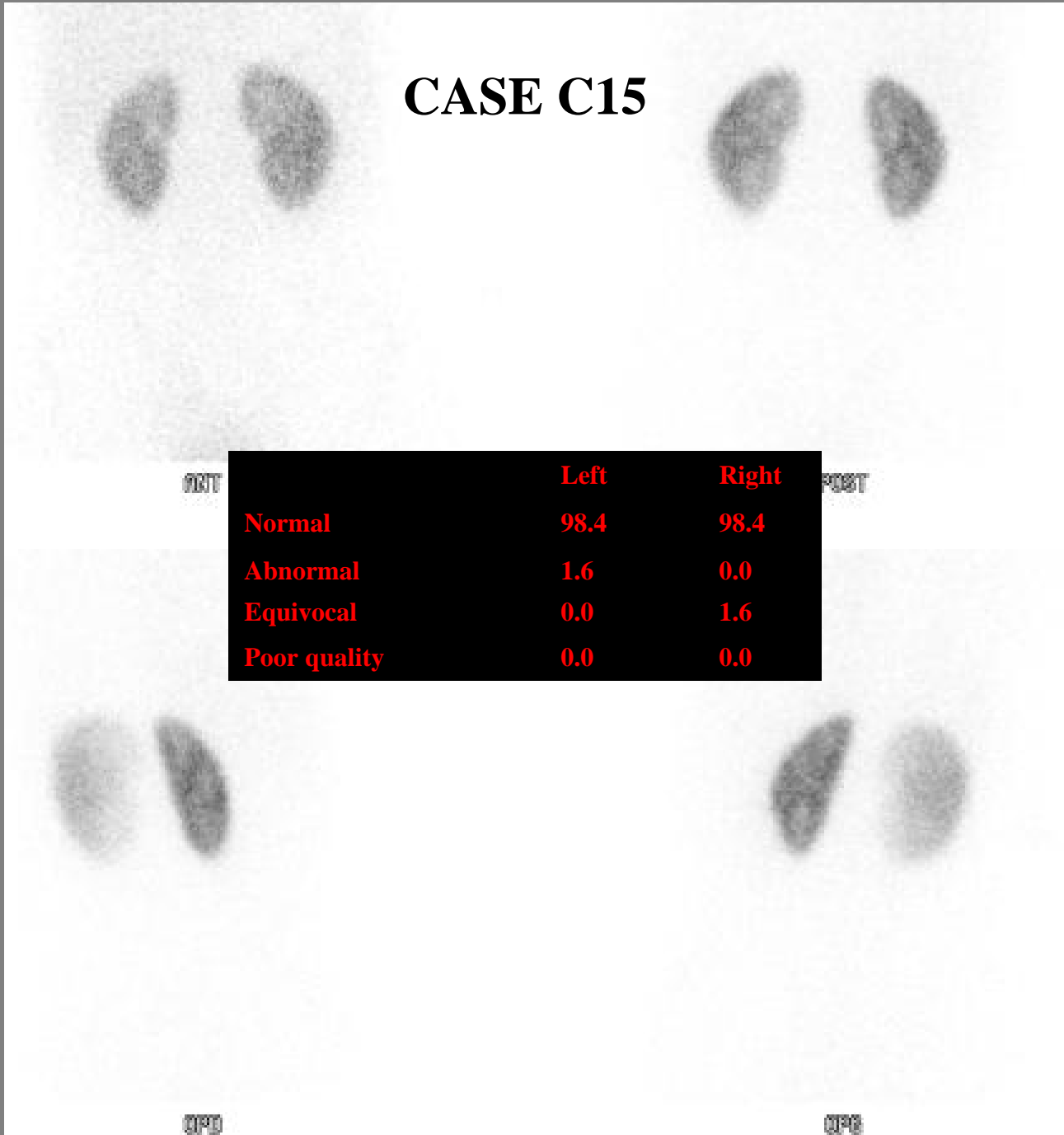


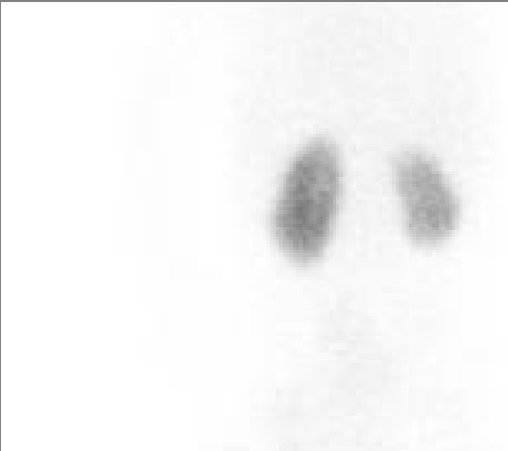
PO



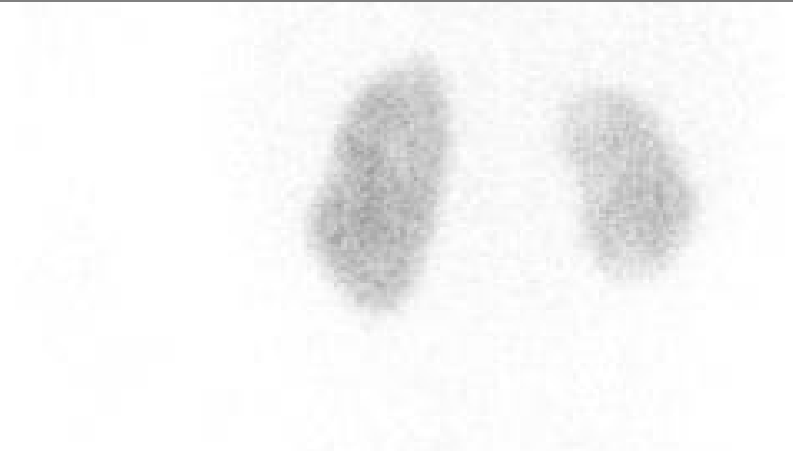
PO

CASE C15





POST ZL.38



POST ZL.38



OPD

CASE C16



OPD

CASE C16

POST ZL.38

POST ZL.38

	Left	Right
Normal	21.3	36.1
Abnormal	37.7	23.0
Equivocal	11.5	6.6
Poor quality	29.5	34.4

CPD

CPD

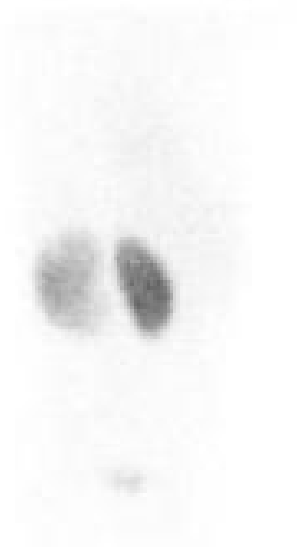


POST 21.33



POST 22

CASE C17



OPD



OPD

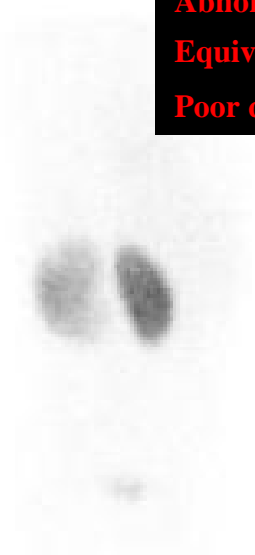
CASE C17



POST 21.000

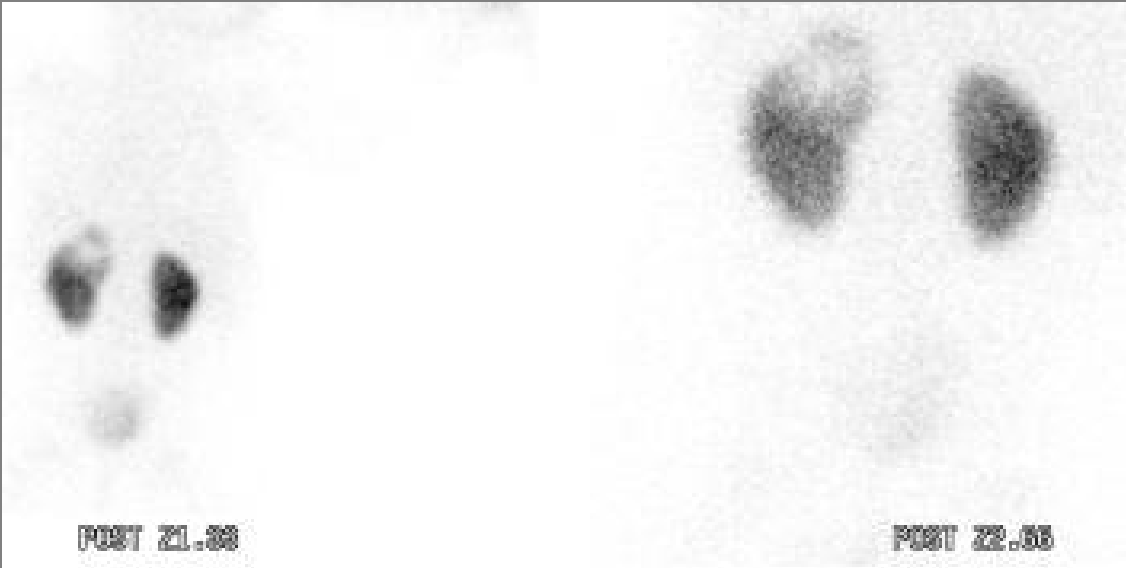
POST 22

	Left	Right
Normal	3.3	98.4
Abnormal	83.6	0.0
Equivocal	13.1	1.6
Poor quality	0.0	0.0

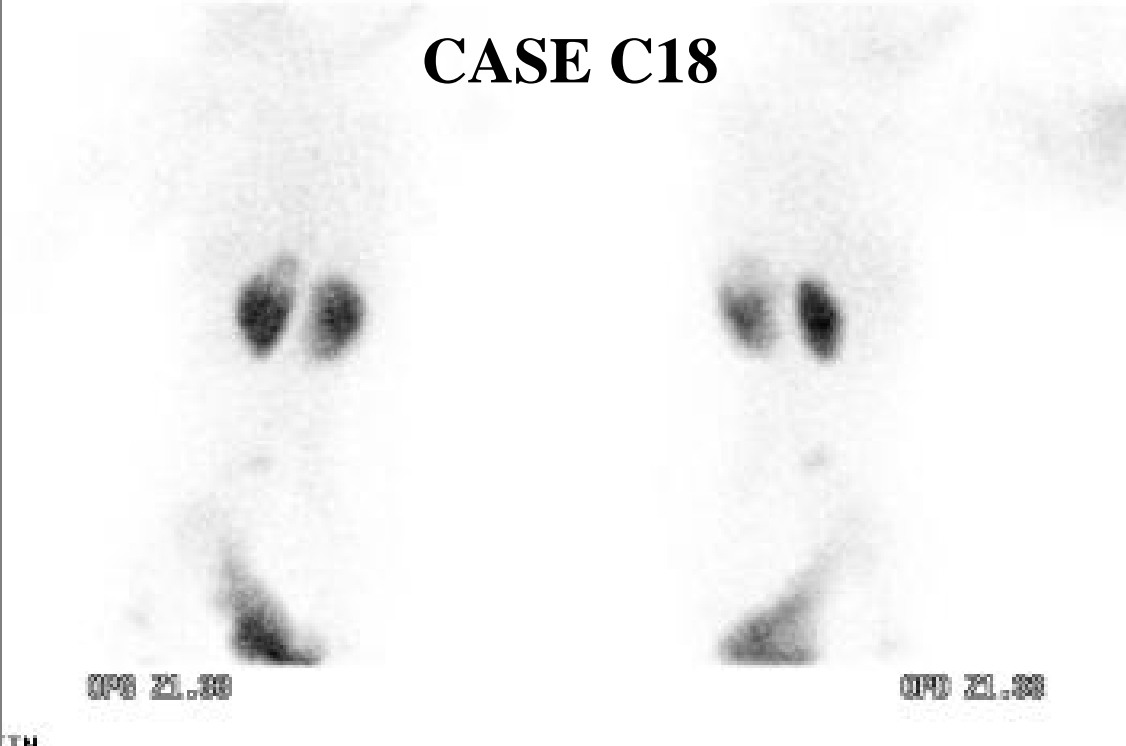


DIP0

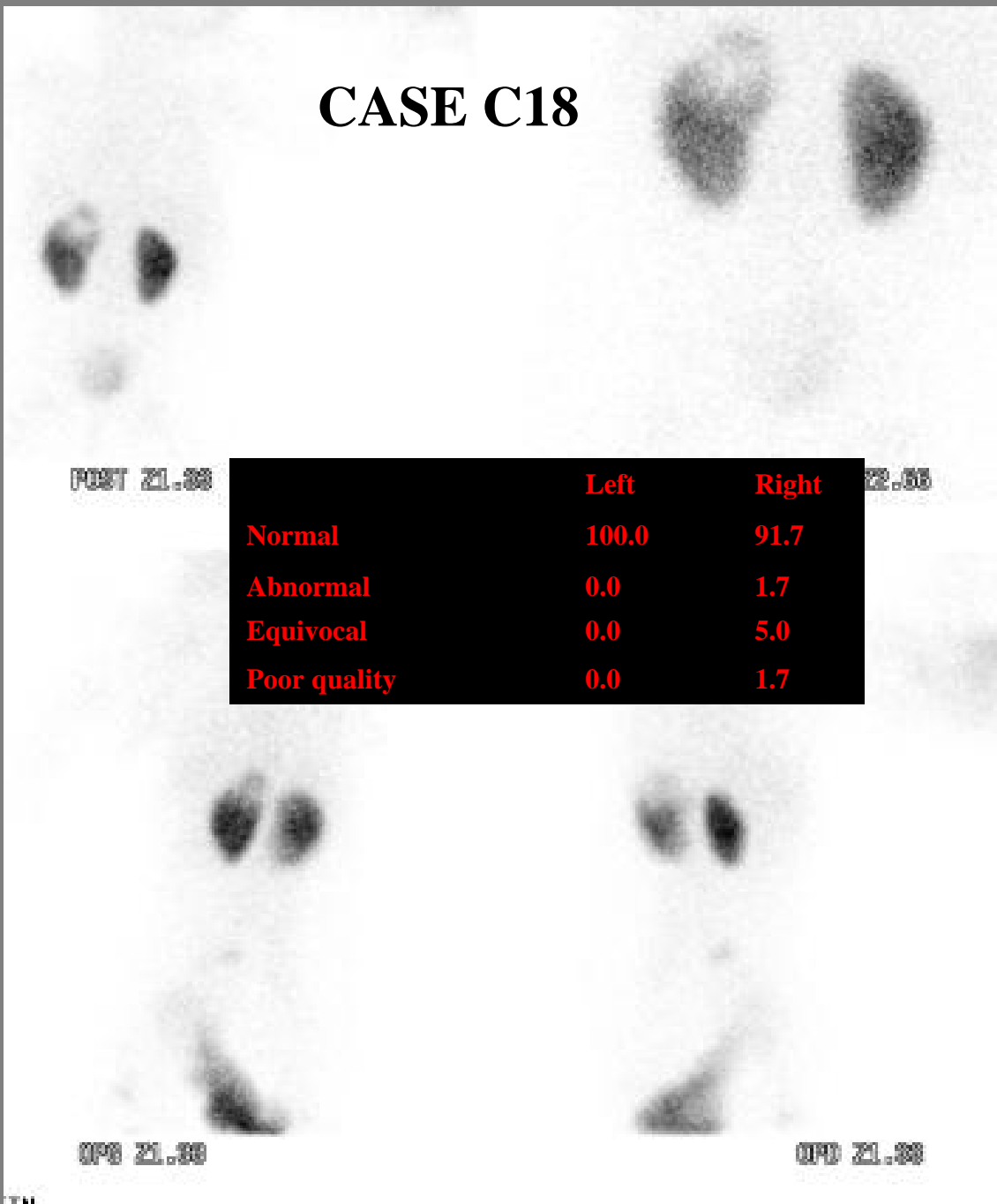
DIP2



CASE C18



CASE C18



POST 21.88

22.88

	Left	Right
Normal	100.0	91.7
Abnormal	0.0	1.7
Equivocal	0.0	5.0
Poor quality	0.0	1.7

0P8 21.88

0P8 21.88



POST 21.30



POST 22.0



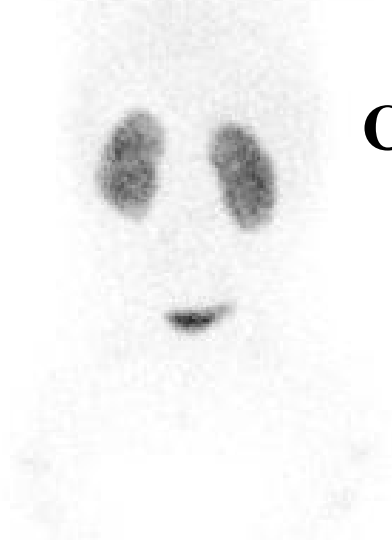
POST 21.30

CASE C19



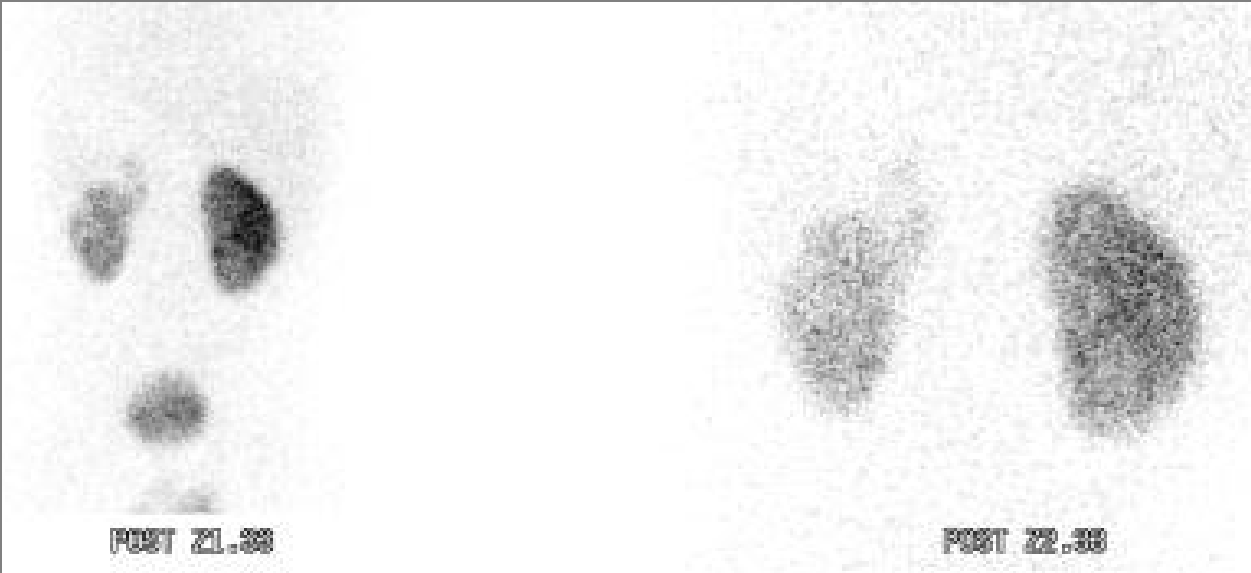
POST 21.30

CASE C19



	Left	Right
Normal	26.7	93.4
Abnormal	45.0	0.0
Equivocal	25.0	3.3
Poor quality	3.3	3.3

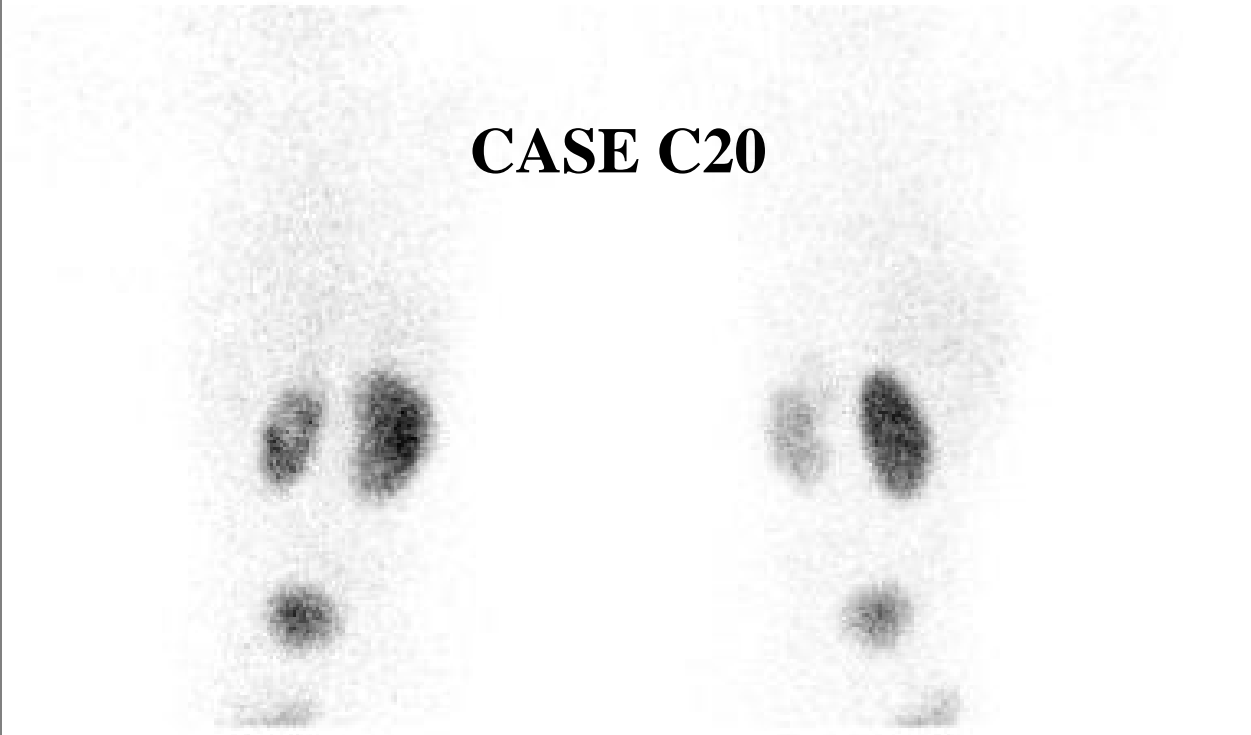




POST 21.88

POST 22.88

CASE C20



Q10

Q16

CASE C20

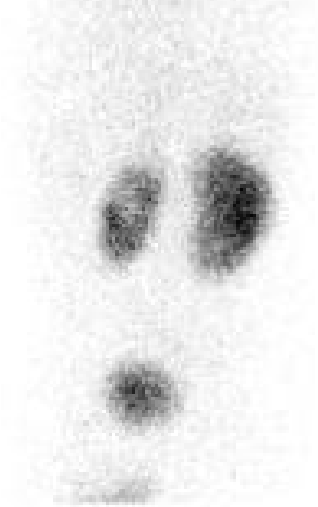


POST 21.88



POST 22.88

	Left	Right
Normal	1.7	98.3
Abnormal	98.3	0.0
Equivocal	0.0	1.7
Poor quality	0.0	0.0



QIP0



QIP8