2022 MID-ATLANTIC CONFERENCE

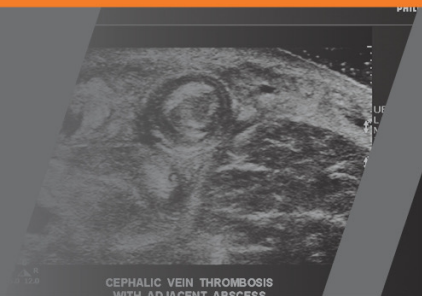
10th ANNUAL CURRENT CONCEPTS IN

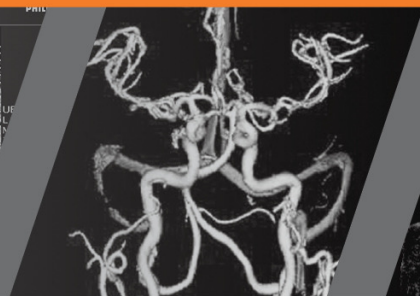
VASCULAR THERAPIES

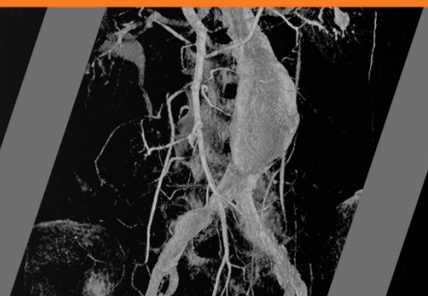
2022

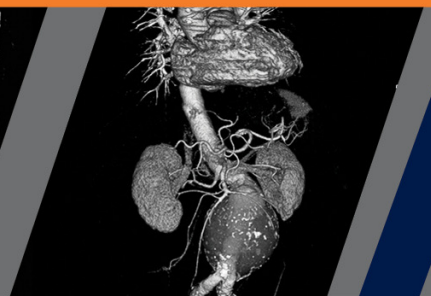
Hilton Virginia Beach Oceanfront
Virginia Beach, Virginia

APRIL 28-30









Sentara Vascular Specialists

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All submassive pulmonary embolisms should be treated with catheter directed therapy

Nizar Hariri

Case presentation

. 65 y/o male s/p left ankle tendon surgery. Presented with SOB.

. PMH: Hypothyroidism. No hx of lung disease.

. PSH : Ing hernia repair. And rotator cuff repair and recent tendon repair(1 month ago)

.SH: never used tobacco. No recreation drugs.

. Meds : Asa after his ankle surgery and Thyroid replacement medications.

. Physical exam : NAD whoever he seemed mildly labored with his respiratory effort.

. VS : Temp:98.7 F. HR: 90. BP: 127/ 87. Spo2: 96% on room air.

. No significant swelling in his lower extremities. No murmurs.

Case presentation

Labs :

	02/02/22 0959
WBC	11.3*
HEMOGLOBIN	14.6
HCT	42.2
PLATELET	170
SEGS	79*
LYMPHOCYTES	12*

Basic Metabolic Profile

Recent Labs

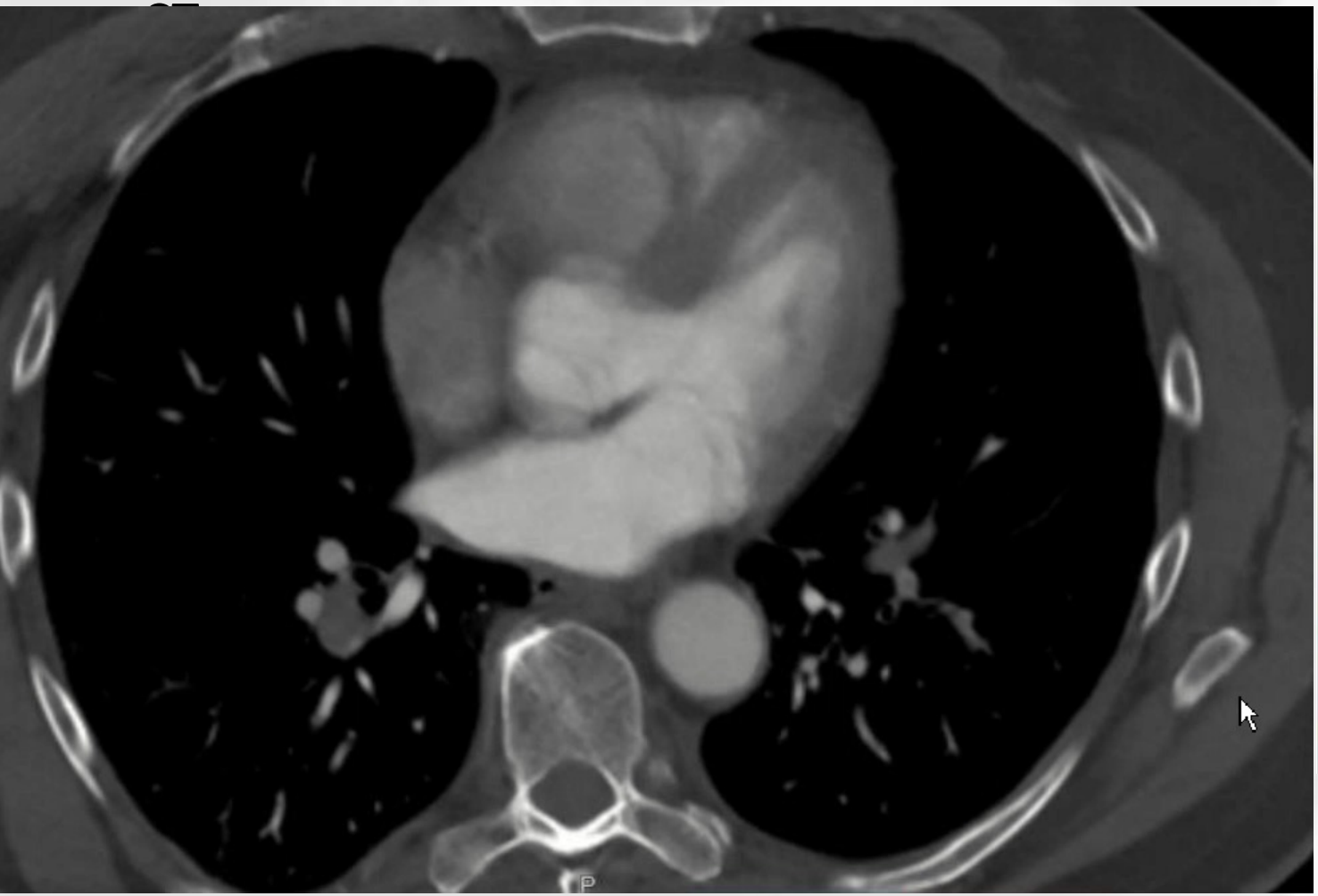
	02/02/22 0959
NA	134
POTASSIUM	3.9
CHLORIDE	98
CO2	22
BUN	12
CREAT	1.0
GLUCOSE	146*
CALCIUM	9.6

Component	Ref Range & Units	2 mo ago
NT proBNP	<=125 pg/mL	182 ▲

Component	Ref Range & Units	2 mo ago
Troponin (T) Quant High Sensitivity (5th Gen)	0 - 19 ng/L	14

Component	Ref Range & Units	2 mo ago
SARS-CoV-2 PCR (COVID-19)	Not Detected	Not Detected

Case presentation



Pulmonary CTA: A saddle embolus is present which bridges the right and left hepatic lobes. Pulmonary emboli are present in segmental and subsegmental pulmonary arteries to the bilateral upper lobes (left greater than right), right middle lobe, and bilateral lower lobes. No flattening or paradoxical bowing of the interventricular septum is seen to suggest right heart strain.

Case presentation

He was started on heparin gtt and admitted.

Echo was ordered.

When we saw the patient, he seemed in some respiratory distress, however he was still maintaining a Spo2 above 90%.

While Awaiting the echo Lab trends were sent.

Result status: Final result

CONCLUSIONS

* Complete transthoracic echocardiogram performed with 2D imaging, color Doppler, and spectral Doppler.
* Left ventricular systolic function is normal with an ejection fraction of 56 % by Simpson's biplane.
* Left ventricular chamber size is normal.
* There is concentric left ventricular hypertrophy with a moderately thickened septal wall and mildly thickened posterior wall.
* Left ventricular diastolic function: normal.
* Right ventricular systolic function is normal with TAPSE measuring 1.78 cm and TAPSV measuring 13.1 cm/s.
* Right ventricular chamber dimension is normal.
* No pulmonary hypertension, estimated pulmonary arterial systolic pressure is 13 mmHg.
* The aortic root at the sinus of Valsalva is dilated measuring 4.2 cm with an index of 1.97 cm/m2.
* No hemodynamically significant valvular disease.
* No mass, shunts, or thrombi.

Comparison

* No prior study is available for comparison.

Case presentation

Component	Latest Ref Rng & Units	2/4/2022	2/3/2022	2/2/2022
		2:09 AM	10:30 AM	9:59 AM
NT proBNP	<=125 pg/mL	42	67	182 (H)

Component	Latest Ref Rng & Units	2/4/2022	2/3/2022	2/2/2022
		2:09 AM	10:30 AM	9:59 AM
Troponin (T) Quant High Sensitivity (5th Gen)	0 - 19 ng/L	9	11	14

Next day he remained HD stable, but he was c/o increase SOB and respiratory effort was not able to do 5 mins walk to evaluate his Spo2 with ambulation. . But still maintain his Spo2> 90%.

His trends of labs as above.

Given the echo results and his clinical picture we decided to???

Question? What to do?

What is this patient simplified Pulmonary Embolism Severity Index (sPESI) and BOVA score

Age 65. VS: HR: 88, Spo2: 97%, BP: 120/77. Trop:11 (WNL), BNP: 67 (WNL). NO Hx of lung disease or malegnancies.

Simplified Pulmonary embolism Severity Score (sPESI)

Age, years	**≤80 0**	>80 +1
History of cancer	**No 0**	Yes +1
History of chronic cardiopulmonary disease	**No 0**	Yes +1
Heart rate, bpm	**<110 0**	≥110 +1
Systolic BP, mmHg	**≥100 0**	<100 +1
O_2 saturation	**≥90% 0**	<90% +1

Low risk

1.1% risk of death in the "Low" risk group (0 points), with 1.5% having recurrent thromboembolism or non-fatal bleeding

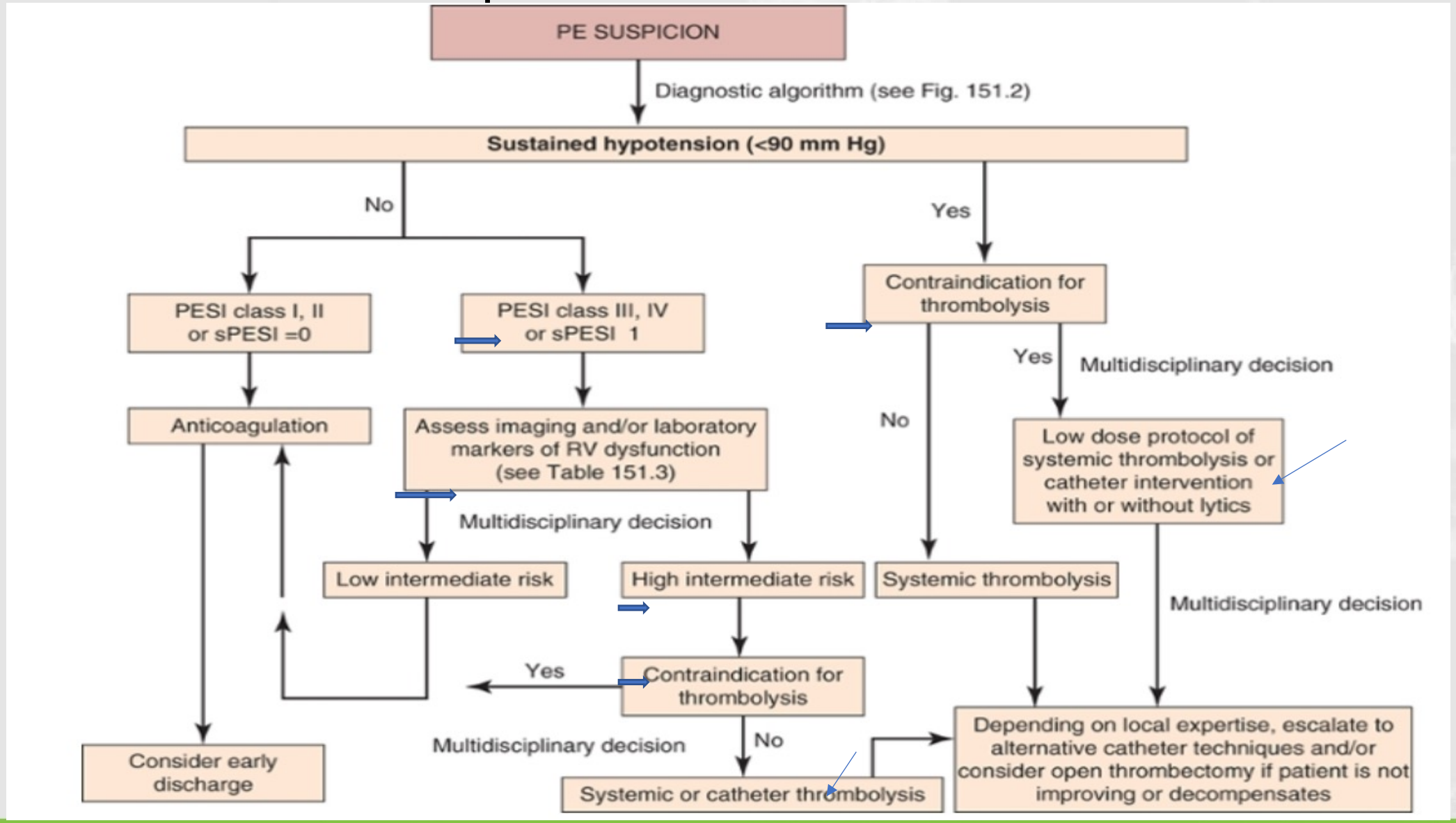
Diagnostic values to help guide tx

BOVA score

Systolic BP If sBP <90, patient not eligible for Bova scoring	>100 mm Hg 0	
	90-100 mmHg +2	
Elevated cardiac troponin Standard assay and lab cutoff value	No 0	Yes +2
RV dysfunction On TTE: RV/LV ratio >0.9, sPAP >30, RV end diastolic diameter >30mm, RV dilation, or free wall hypokinesis; on CT: RV/LV ratio >1 (short axis diameter)	No 0	Yes +2
Heart rate, beats/min	<110 0	≥110 +1

0 points Bova Score	**Stage I** Low risk	**4.4** % PE-related complications (death from PE, hemodynamic collapse, or recurrent nonfatal PE) at 30 days 3.1% PE-related mortality at 30 days

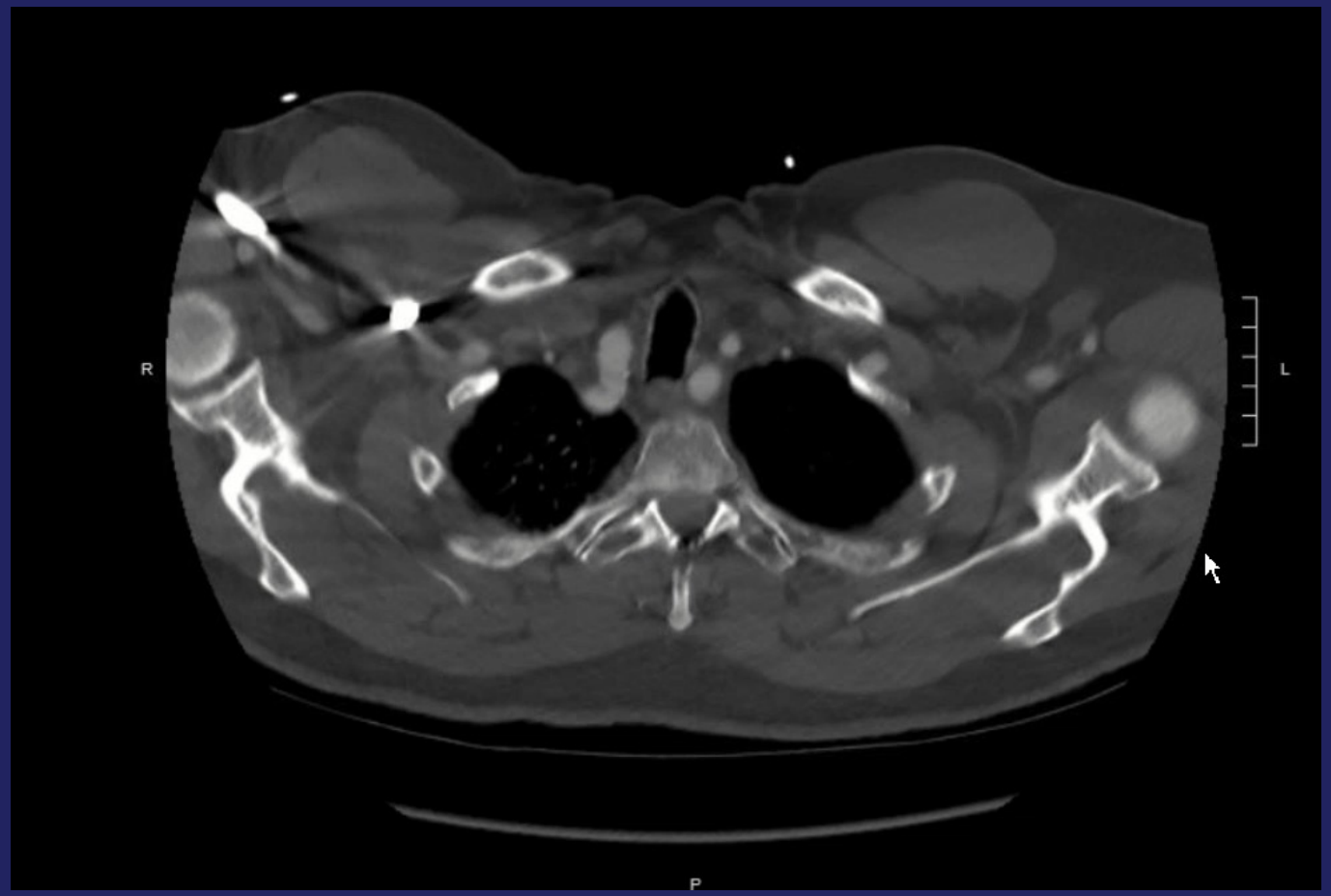
Recommended protocol



Rutherford

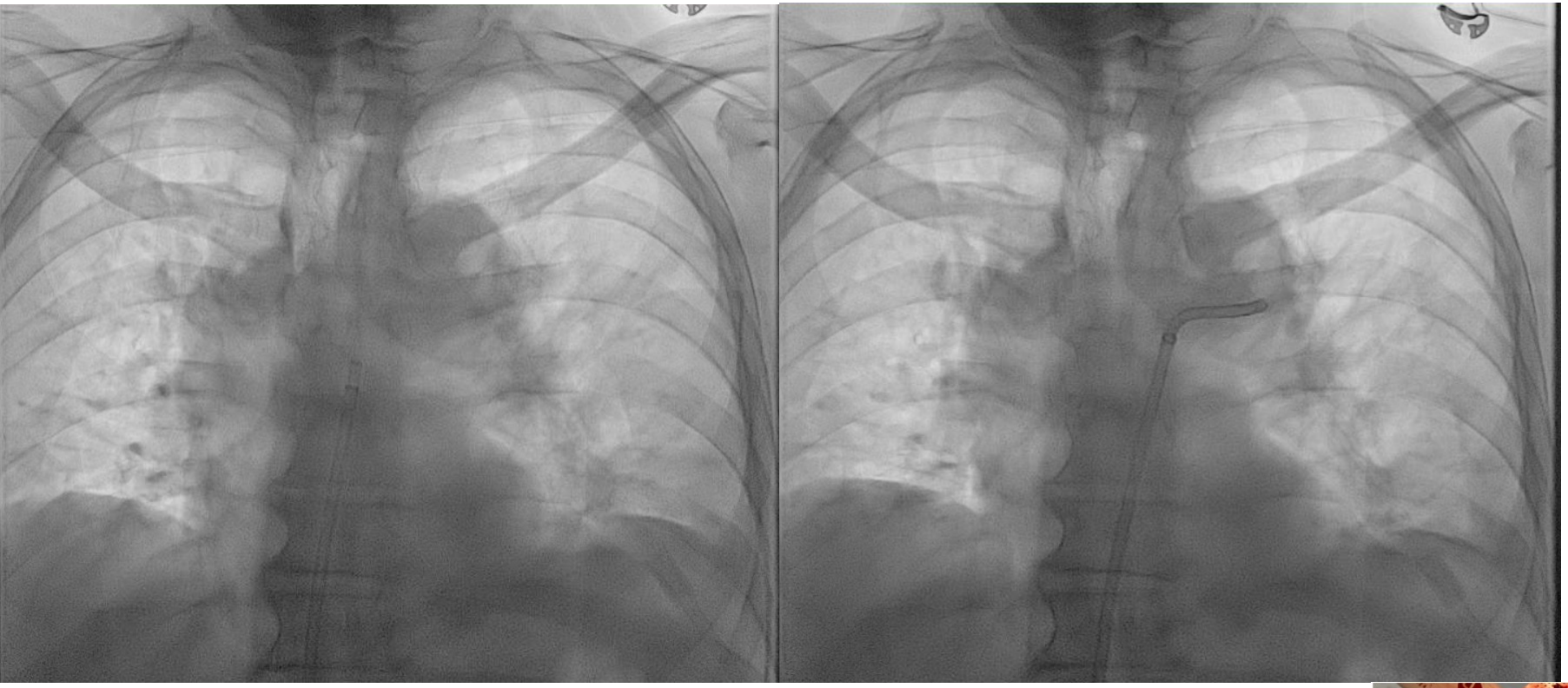
Answer

- We repeated his CTA to eval for any changes :



left lower lobe either infarct or atelectasis.

Clinically he was still in respiratory distress.



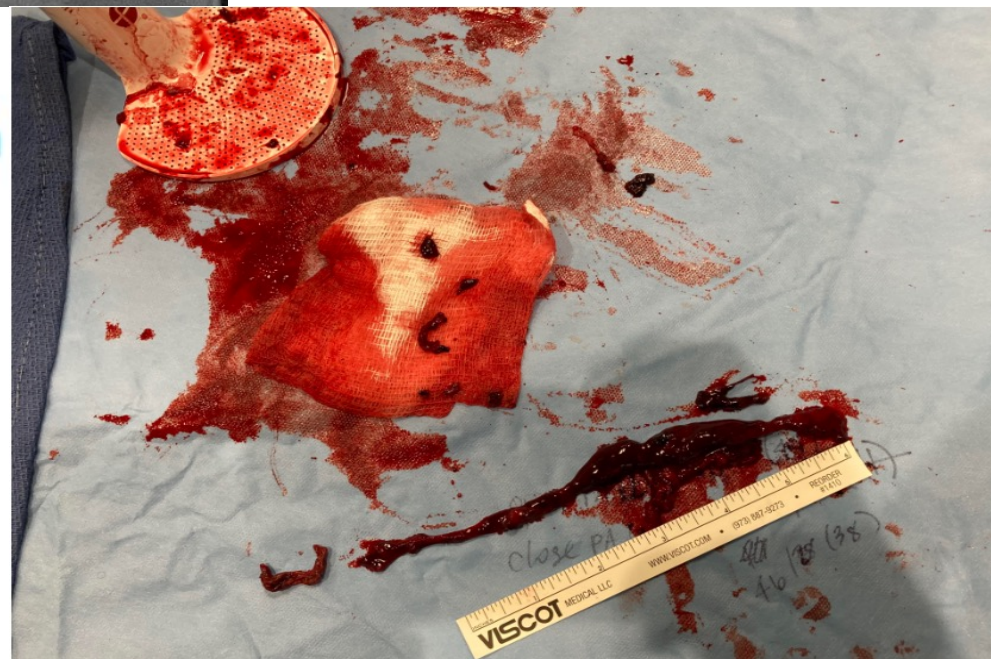
Findings:

Large amount of thrombus retrieved from bilateral pulmonary arteries with saddle component

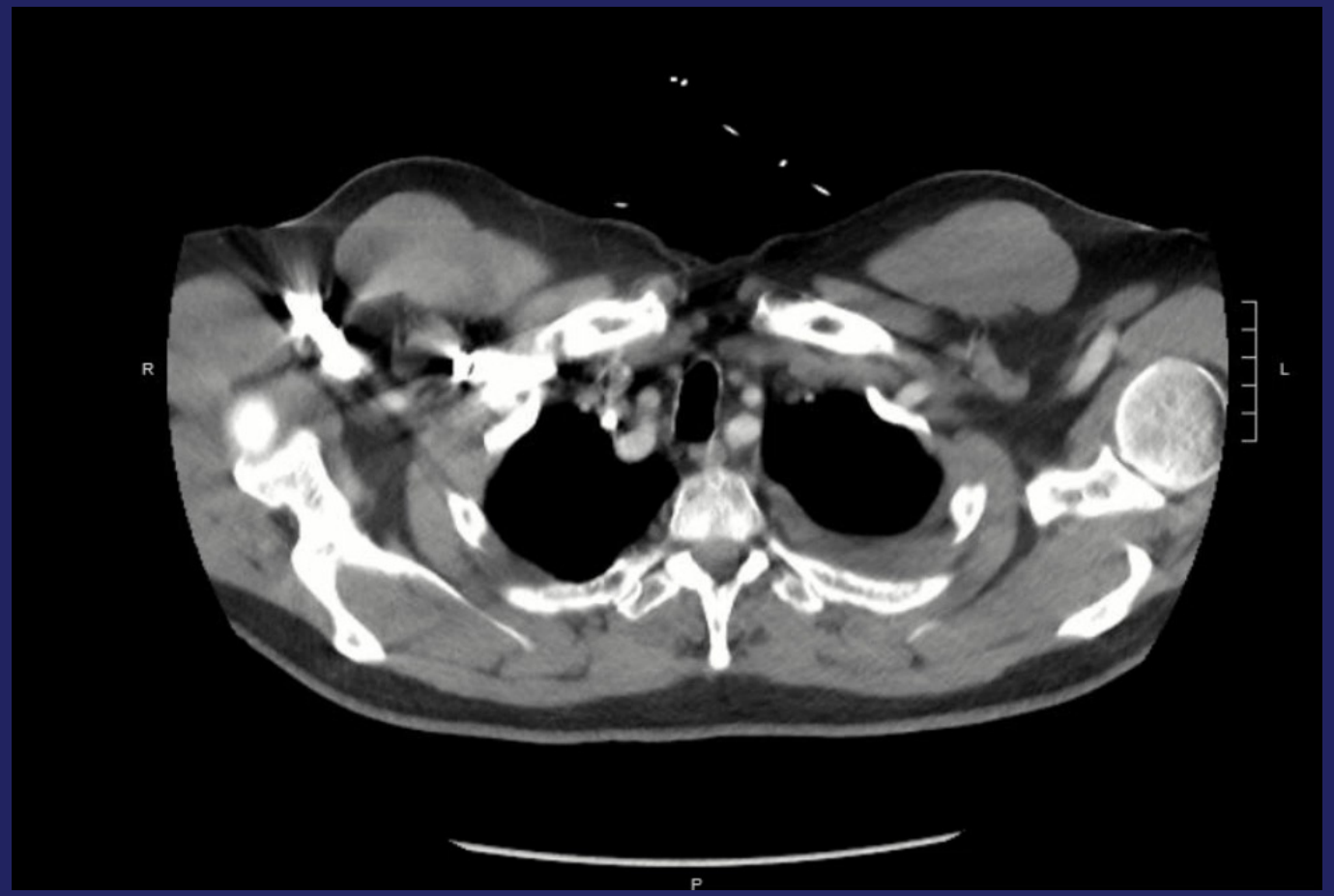
Patent pulmonary vasculature post-intervention

Opening pressure 61/34 (44)

Closing pressure 46/28 (34)



Follow up

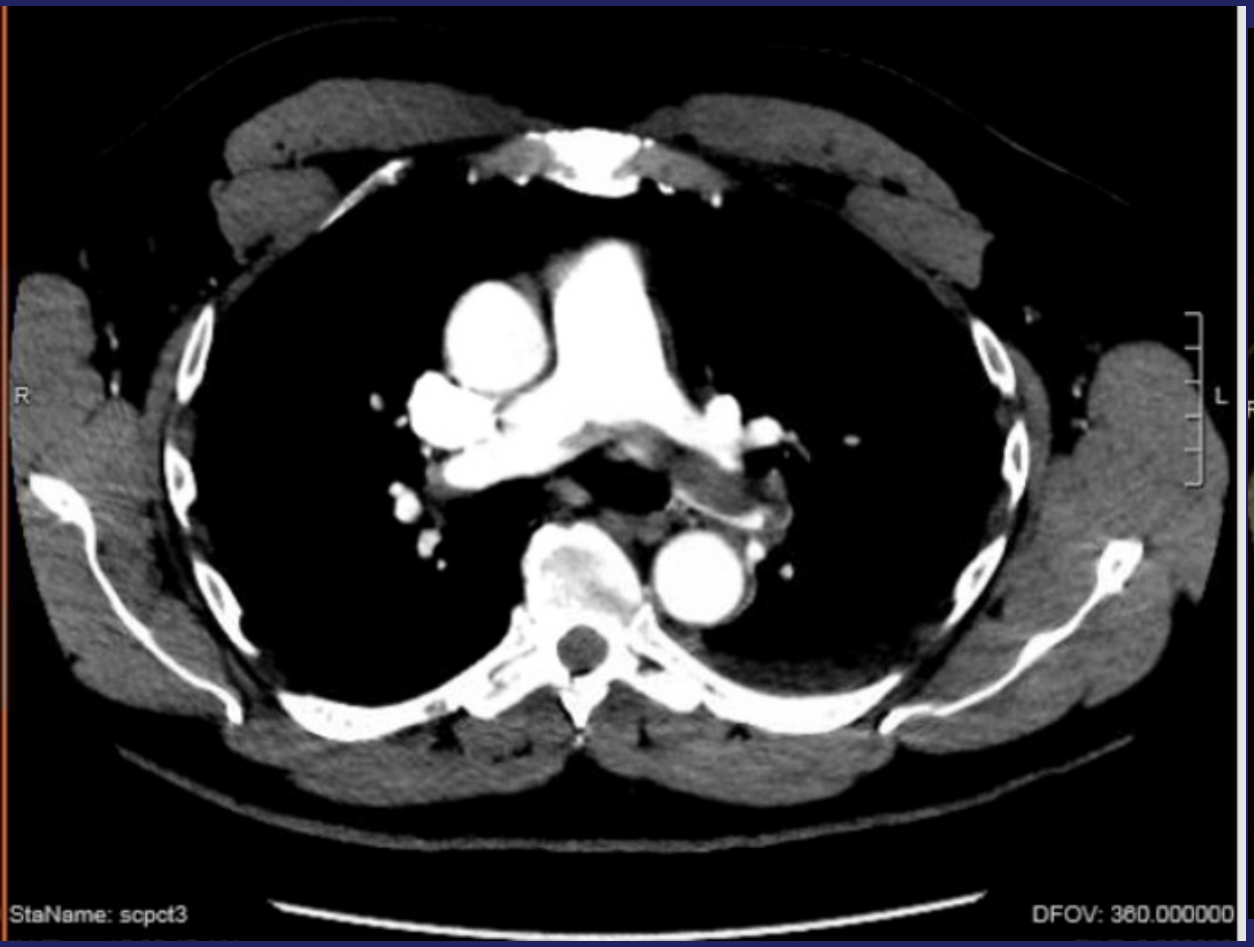


He felt better right after the thrombectomy on the table.

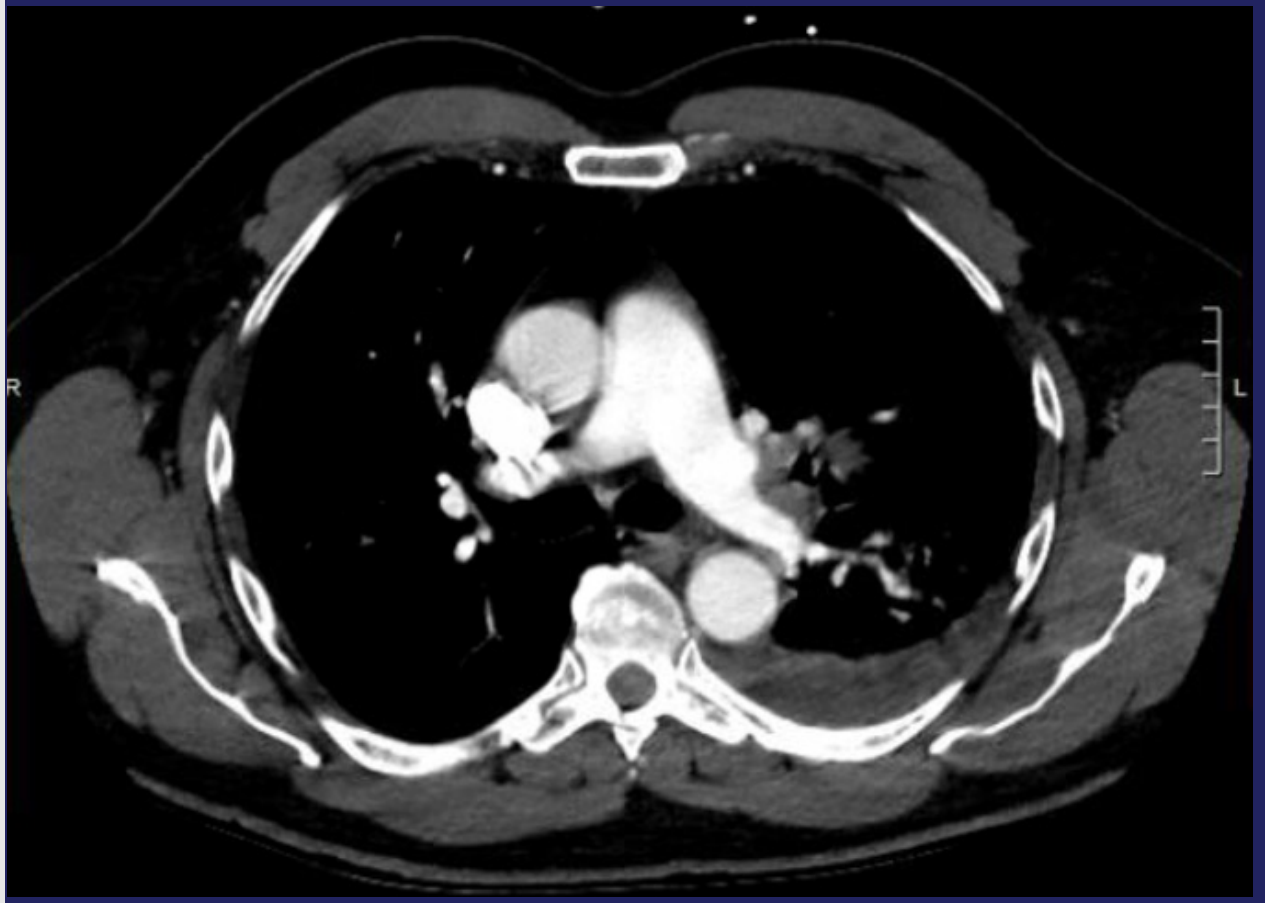
His vitals were same as preop.

Heparin gtt started right away after boluses in the Cath lab.

Follow up



Preop



Postop

Office Follow up

- He had no complaints of any SOB . He can walk without any SOB . No lower extremity swelling.
- Happy with results.

- The question still remains , Should we have offered him a thrombectomy?!