COVID-19 pneumoonia tüüpiline kulg...

...paari patsiendi näitel

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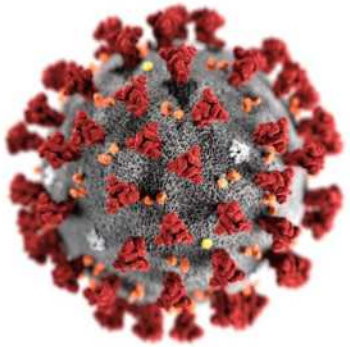


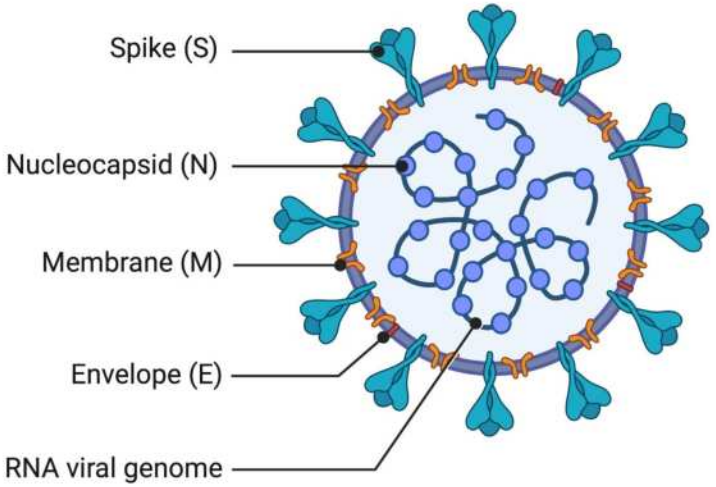
Olulisemad üldteadmised

Esmaselt isoleeritud detsembris 2019 Wuhanis

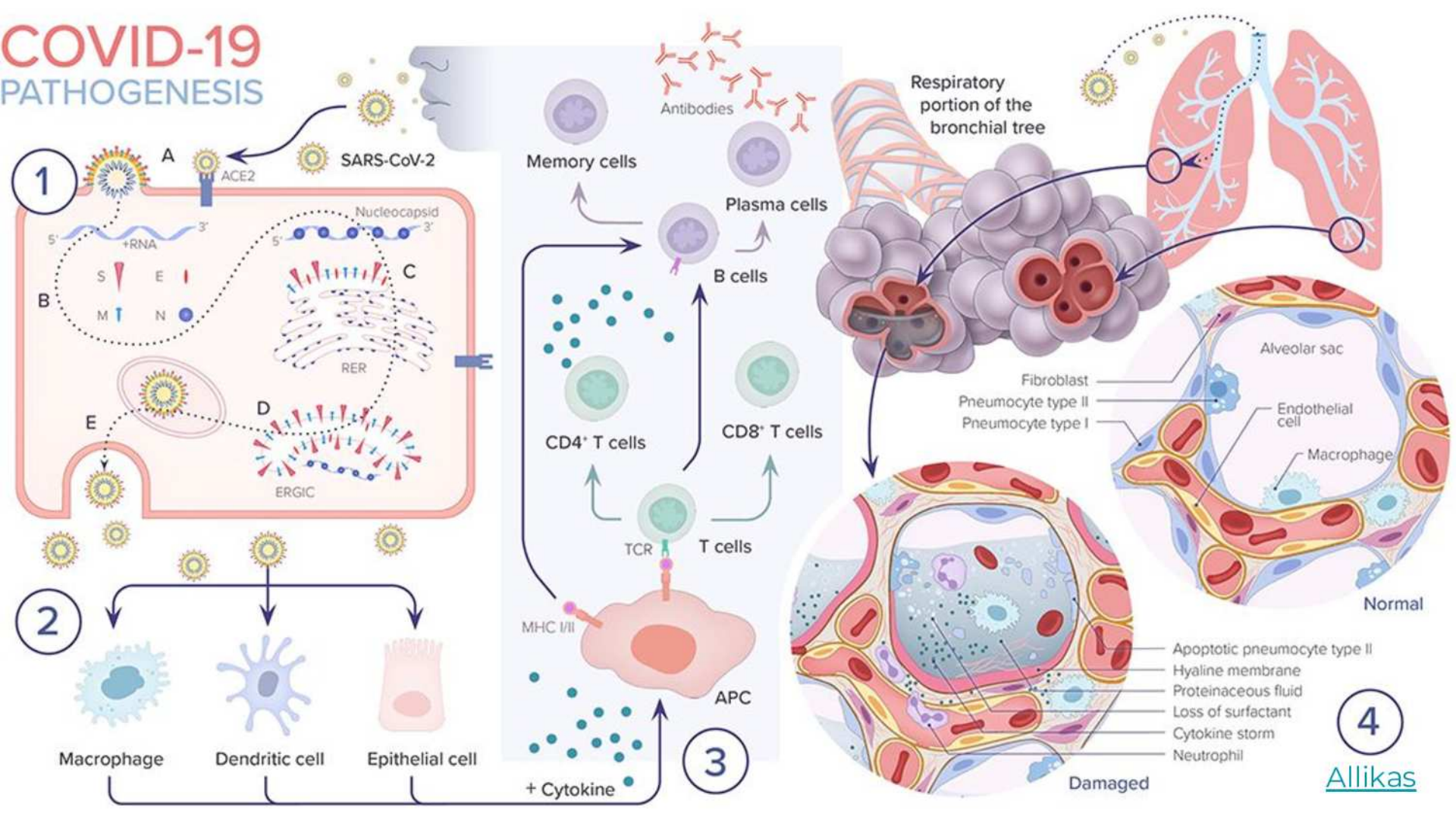
Zoonootilist päritolu RNA viirus

Neli peamist valku:

- Ogavalk
- Membraanivalk
- Ümbrikuvalk
- Nukleokapsiid



COVID-19
PATHOGENESIS



Allikas

Radioloogia roll

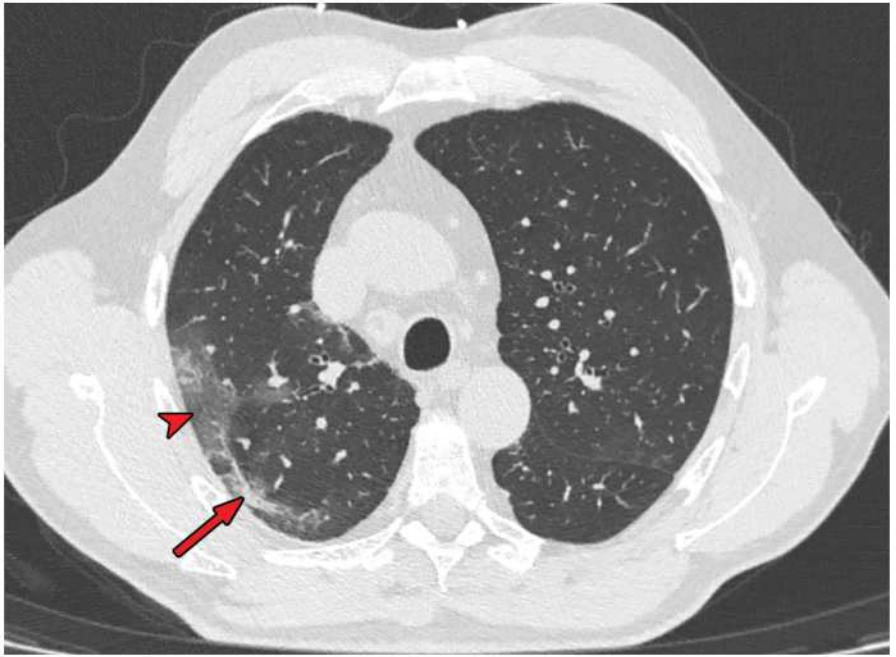
Röntgenülesvõte - haiguse algstaadiumis ning kerge haigestumise korral väheinformatiivne

KT-uuring - tundlikum ja tekivad iseloomulikumad muutusted kui RÖ-s

(Kopsude ultraheli) - on kasutatud POCUS't, kuid puuduvad piisavad uuringud, et hinnata meetodi tundlikkust ja spetsiifilisust

Üle 70% KT-uuringutest esinevad:

- ★ Mattklaasi-tüüpi muutused
- ★ Veresoonte laienemine
- ★ Bilateraalsed muutused
- ★ Enam haaratud alasagarad posterioorselt



Allikas

10-70% KT-uuringutest esinevad:

- ★ Konsolidatsioonid (52%)
- ★ Lineaarsed tihenemised (41%)
- ★ Septaalsed paksenemised ning retikulatsioonid (50%)
- ★ Crazy-paving muster (35%)
- ★ Õhkbronhogrammid (40%)
- ★ Pleura paksenemine (35%)
- ★ Halo tunnus (35%)
- ★ Bronhiektaasid (24%)

<10% juhtudest esineb

Pleuraefusioon 5,2%

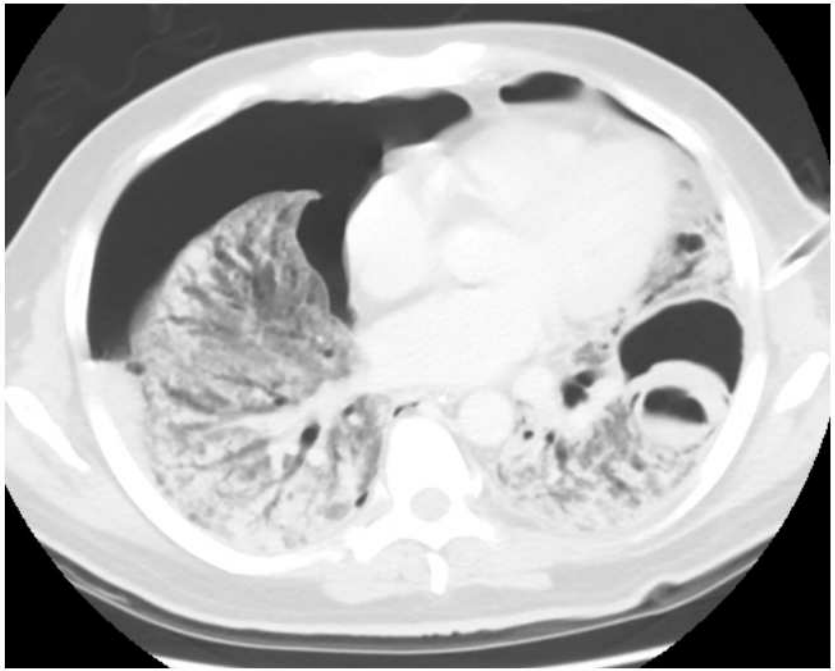
Lümfadenopaatia 5,1%

Pungispuu fenomen 4,1%

Tsentraalselt jaotunud muutused 3,6 %

Perikardiefusioon 2,7%

Kaverniga kopsukolle 0,7%



Jaotumine

Unilateraalne 15%

Multifokaalne 63%

Difuusne 26%

Üksik kolle või fokaalne 11%

Kesk- või ülasagara haaratus 49-55%

Perifeerne lokalisatsioon 59%

Tsentraalne ning perifeerne haaratus 36%

KT leid dünaamikas

Varajane staadium	0-4 päeva	Mattklaasi tüüpi muutus, “crazy paving”, haaratud on vähe sagaraid”
Progressiivne staadium	5-8 päeva	Ulatuslikumad mattklaasi tüüpi muutused ja “crazy paving”
Haripunkt	10-13 päeva	Konsolidatsioonid
Absorptsiooni staadium	>14 päeva	Järk-järguline lahenemine

Haaratuse hindamine

Visuaalne hindamine

Tõsiduse skoor - hindad kõigi viie sagara haaratust eraldi

1. <5% haaratud
2. 5%-25% haaratud
3. 26%-49% haaratud
4. 50%-75% haaratud
5. >75% haaratud

Kõikide sagarate skooride summa alusel saame vahemiku: 0 (ei ole haaratud) kuni 25 (maksimaalne)

Peamised COVID tekkese pneumoonia tüsistused, mida näeme rindkere KT-uuringul:

Akuutne respiratoorne distrass sündroom ARDS

Kopsuarteri trombemboolia (17-35% KATE-uuringutest)

Sekundaarse infektsiooni lisandumine (10%-l hospitaliseeritud patsientidest)

Proposed reporting language for CT findings related to COVID-19

Routine screening CT for diagnosis or exclusion of COVID-19 is currently not recommended by most professional organizations or the US Centers for Disease Control and Prevention

COVID-19 pneumonia imaging classification	Rationale	CT findings	Suggested reporting language
Typical appearance	Commonly reported imaging features of greater specificity for COVID-19 pneumonia.	• Peripheral, bilateral, GGO with or without consolidation or visible intralobular lines ("crazy-paving") • Multifocal GGO of rounded morphology with or without consolidation or visible intralobular lines ("crazy-paving") • Reverse halo sign or other findings of organizing pneumonia (seen later in the disease)	"Commonly reported imaging features of (COVID-19) pneumonia are present. Other processes such as influenza pneumonia and organizing pneumonia, as can be seen with drug toxicity and connective tissue disease, can cause a similar imaging pattern."

Indeterminate appearance	Nonspecific imaging features of COVID-19 pneumonia.	• **Absence of typical features AND**
		• **Presence of:**
		  • Multifocal, diffuse, perihilar, or unilateral GGO with or without consolidation lacking a specific distribution and are non-rounded or non-peripheral.
		  • Few very small GGO with a non-rounded and non-peripheral distribution.
			"Imaging features can be seen with (COVID-19) pneumonia, though are nonspecific and can occur with a variety of infectious and noninfectious processes."

Atypical appearance	Uncommonly or not reported features of COVID-19 pneumonia.	• **Absence of typical or indeterminate features AND**
		• **Presence of:**
		  • Isolated lobar or segmental consolidation without GGO
		  • Discrete small nodules (centrilobular, "tree-in-bud")
		  • Lung cavitation
		  • Smooth interlobular septal thickening with pleural effusion
			"Imaging features are atypical or uncommonly reported for (COVID-19) pneumonia. Alternative diagnoses should be considered."

Negative for pneumonia	No features of pneumonia.	• No CT features to suggest pneumonia.	"No CT findings present to indicate pneumonia. (NOTE: CT may be negative in the early stages of COVID-19.)"

NOTES:
1. Inclusion in a report of items noted in parenthesis in the Suggested reporting language column may depend upon clinical suspicion, local prevalence, patient status as a PUI, and local procedures regarding reporting.
2. CT is not a substitute for RT-PCR, consider testing according to local recommendations and procedures for and availability of RT-PCR.

Proposed reporting language for CT findings related to COVID-19, including rationale, CT findings, and suggested reporting language for each category. Associated CT findings for each category are based upon available literature at the time of writing in March 2020, noting the retrospective nature of many reports, including biases related to patient selection in cohort studies, examination timing, and other potential confounders.

COVID-19: coronavirus disease 2019; CT: computed tomography; GGO: ground-glass opacity; PUI: person under investigation; RT-PCR: reverse transcription polymerase chain reaction.

Tabel, kus on KT leiud ning nõuanded vastuse sõnastamiseks.

60a mees

02.01 haigestus febriilse palavikuga

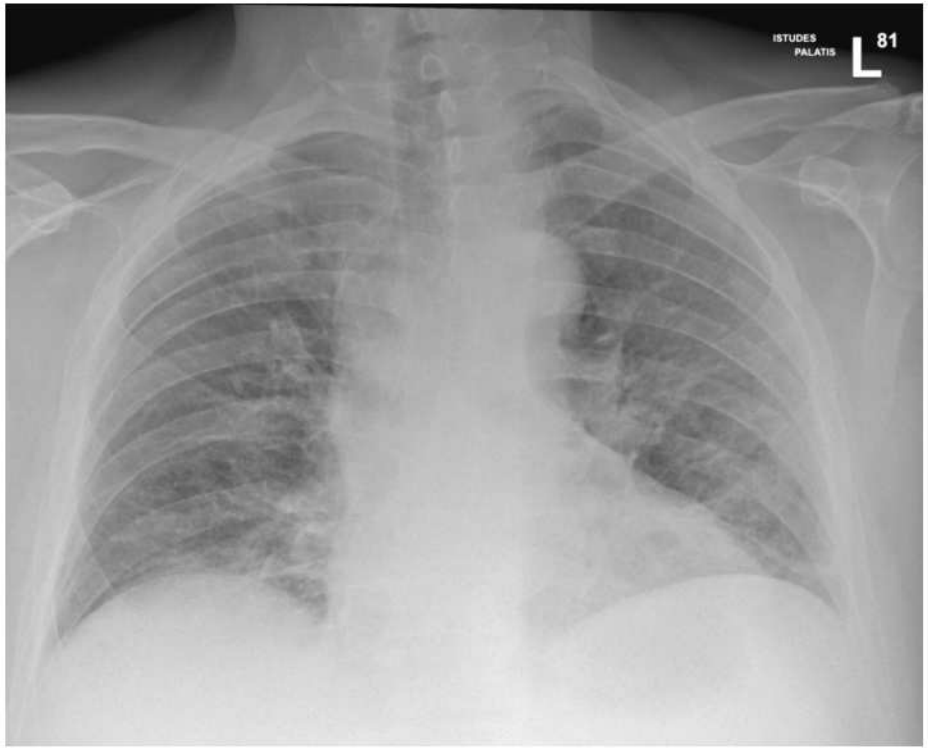
05.01 tekkis hingamisraskus ja kuiv köha

12.01 hospitaliseeriti tava COVID osakonda

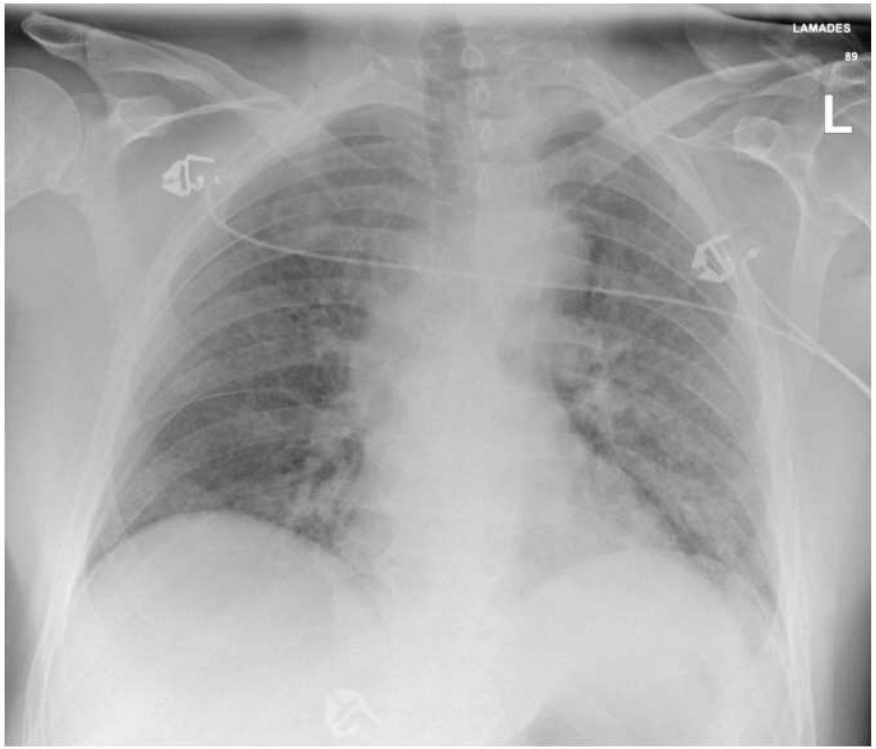
14.01 hingamispuudulikkuse süvenemine → viidud üle I IRO-sse

20.01-**24.01** pt intubeeritud, juhitaval hingamisel

12.01



15.01



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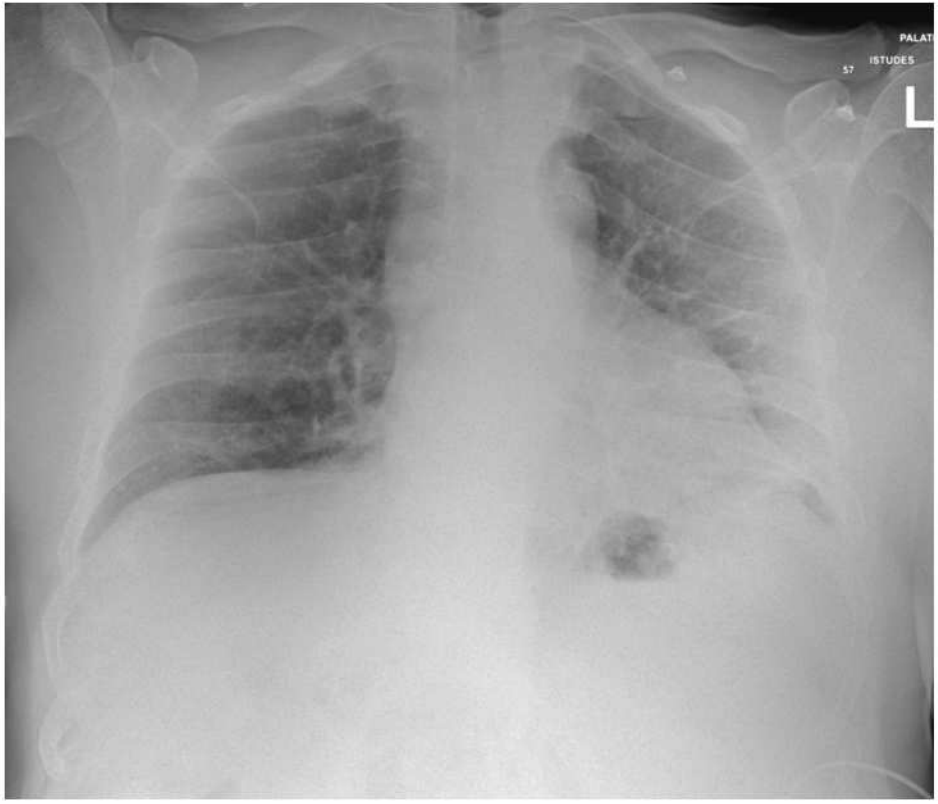

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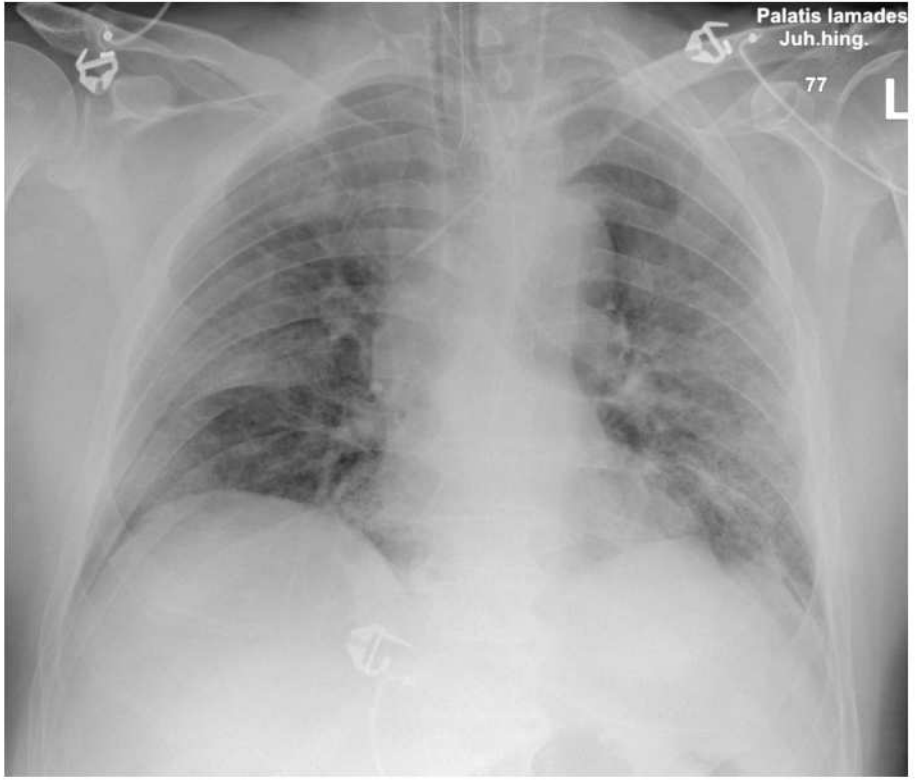
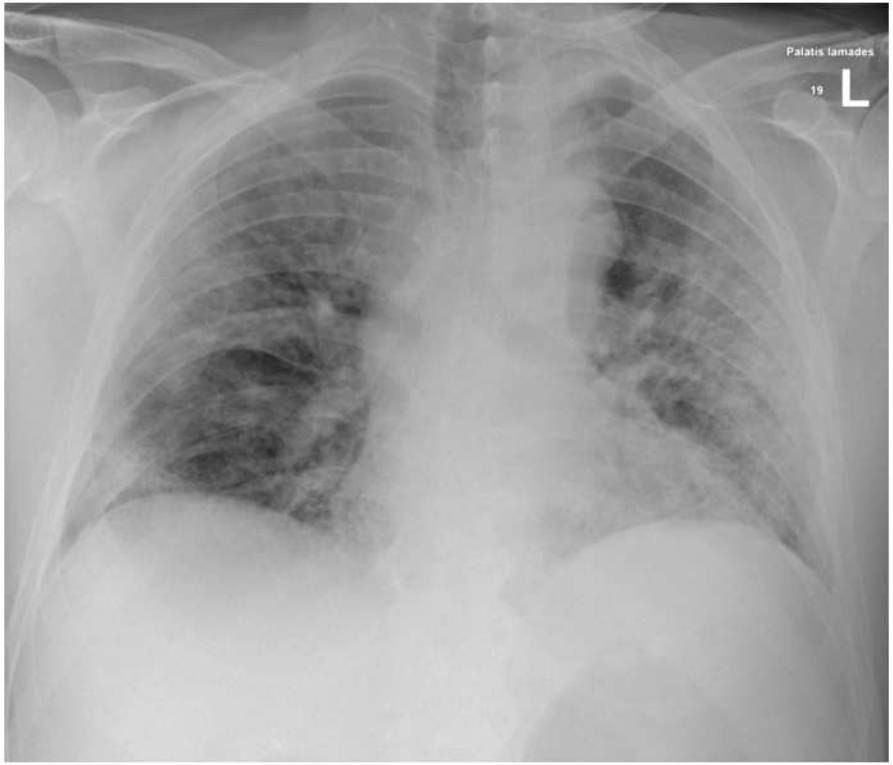
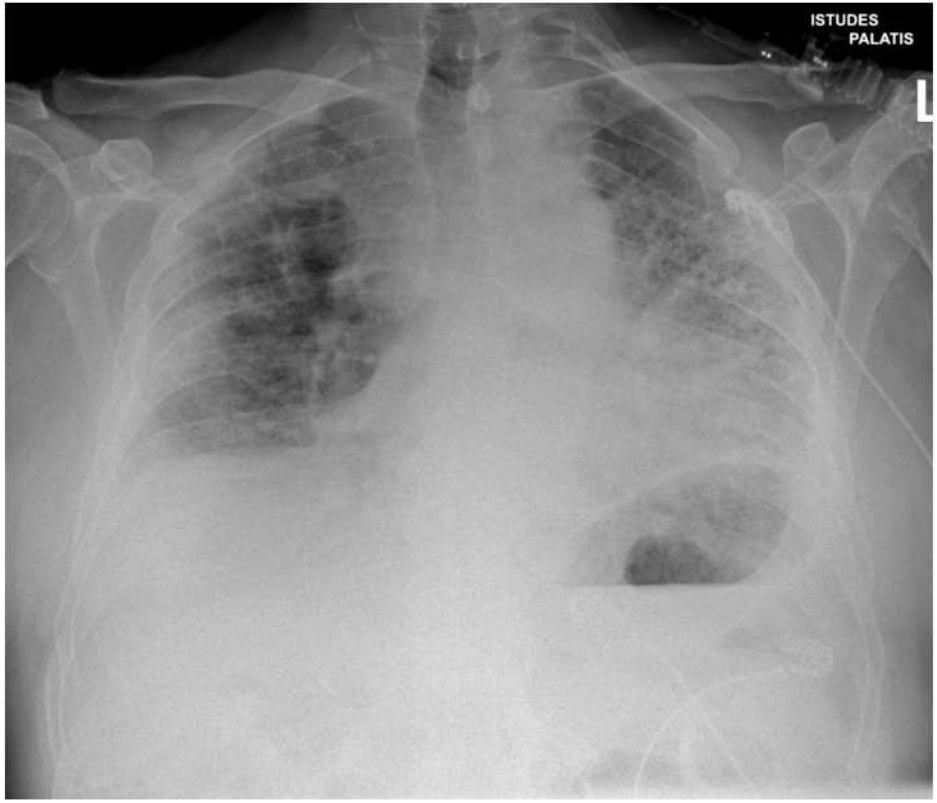


29.01



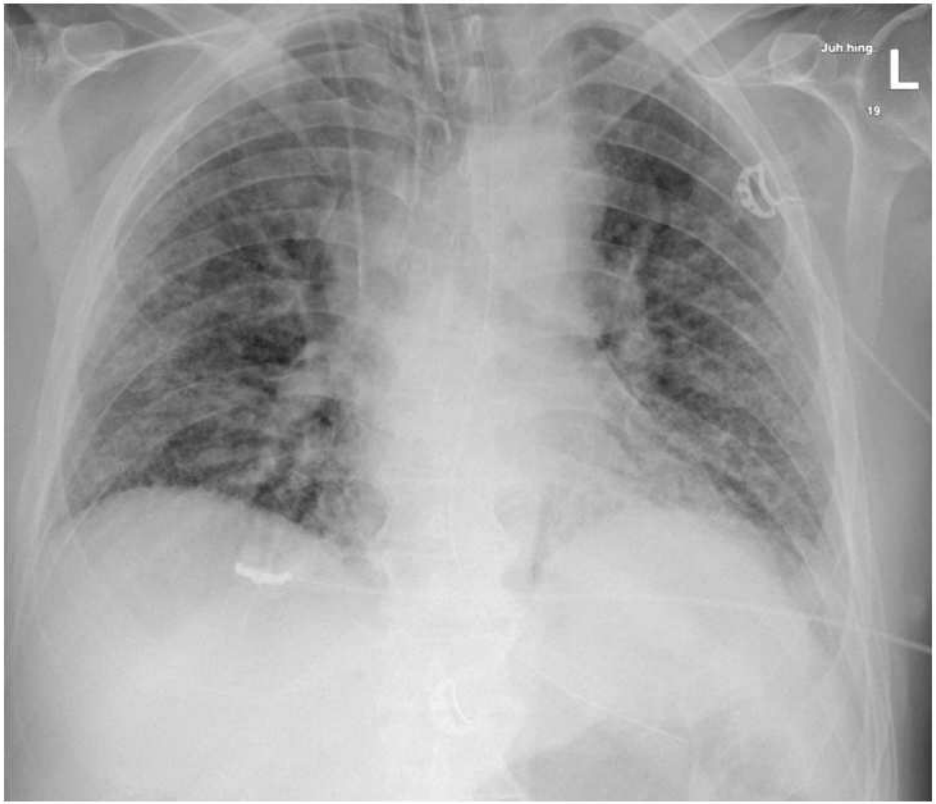
01.02

08.02



15.02

20.02



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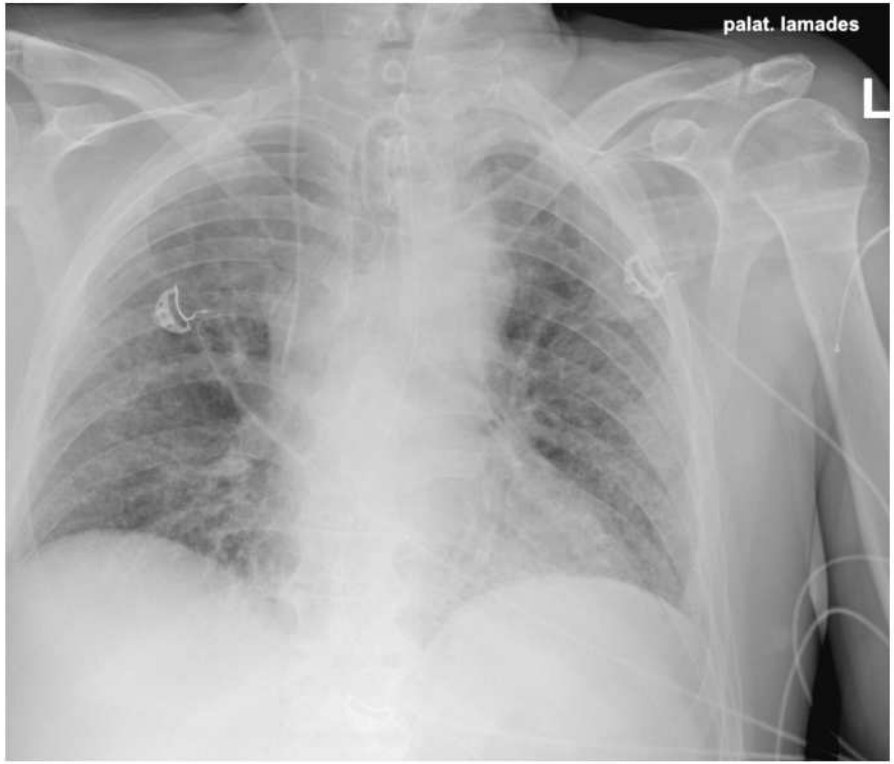
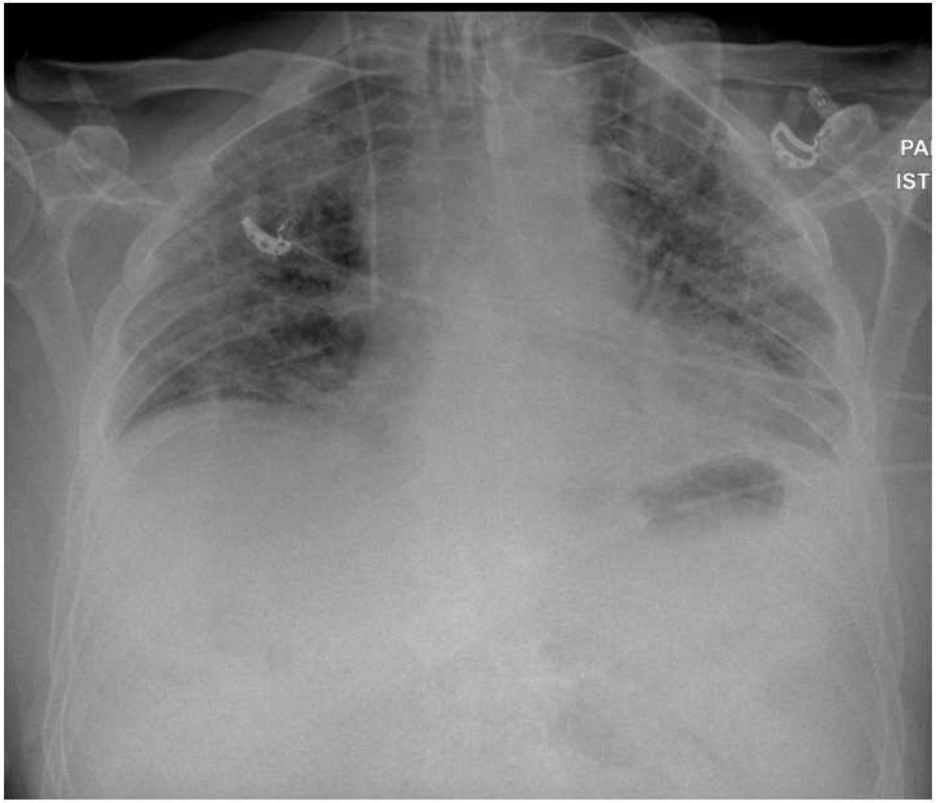
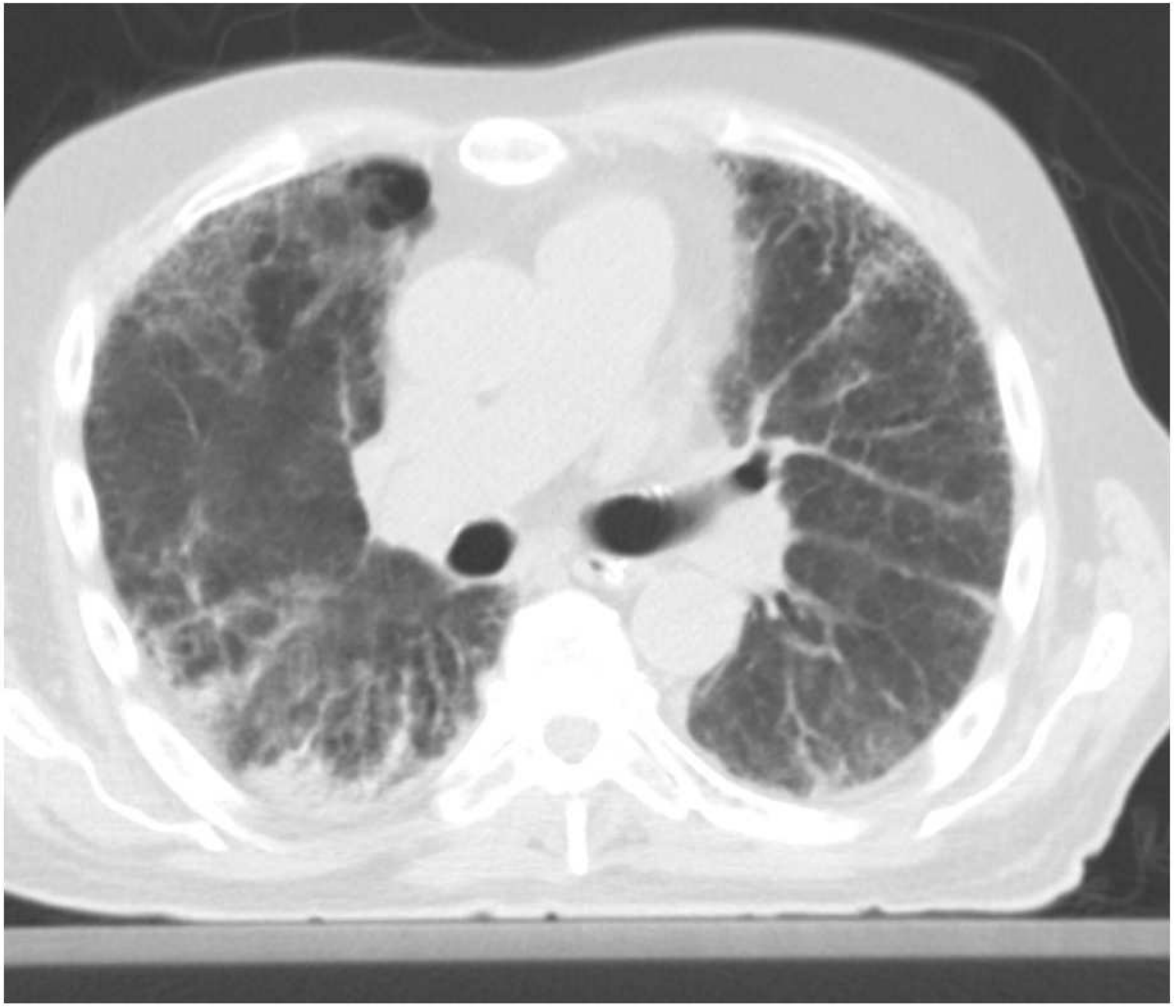


02.03



12.03

18.03



64a mees

07.03 kokkupuude COVID positiivse inimesega

11.03 haigestus palavikuga

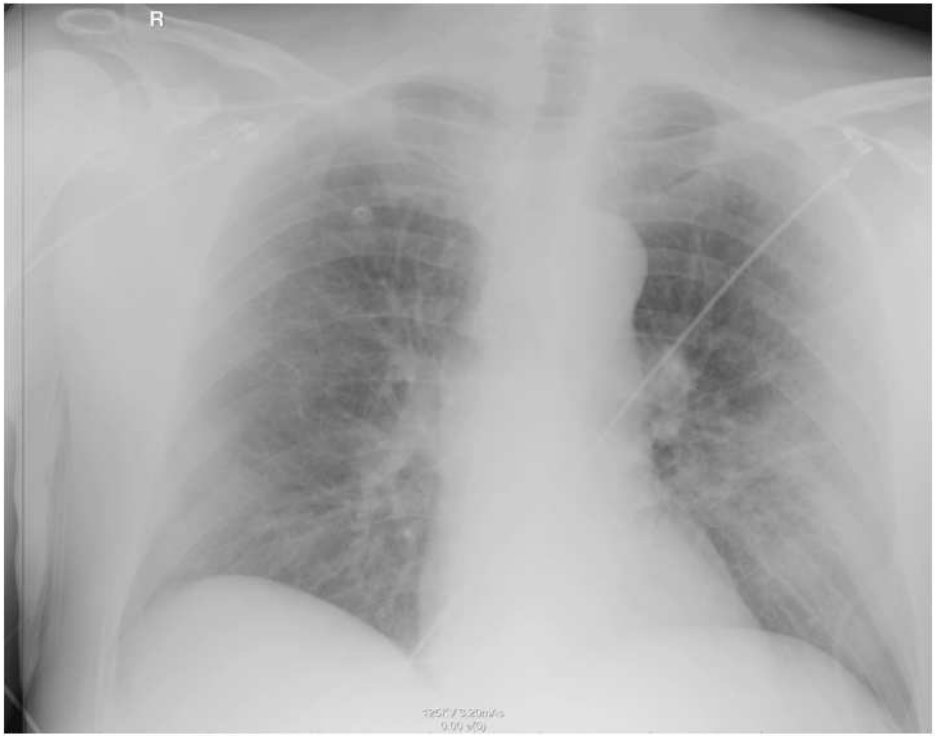
17.03 enesetunde halvenemine

21.03 hospitaliseeriti IRO-sse kahepoolse kopsupõletiku ja hingamispuudulikkuse tõttu

22.03 intubeeriti **04.04** trahheostomeeriti

12.04 esimene alustati võõrutamist

21.03



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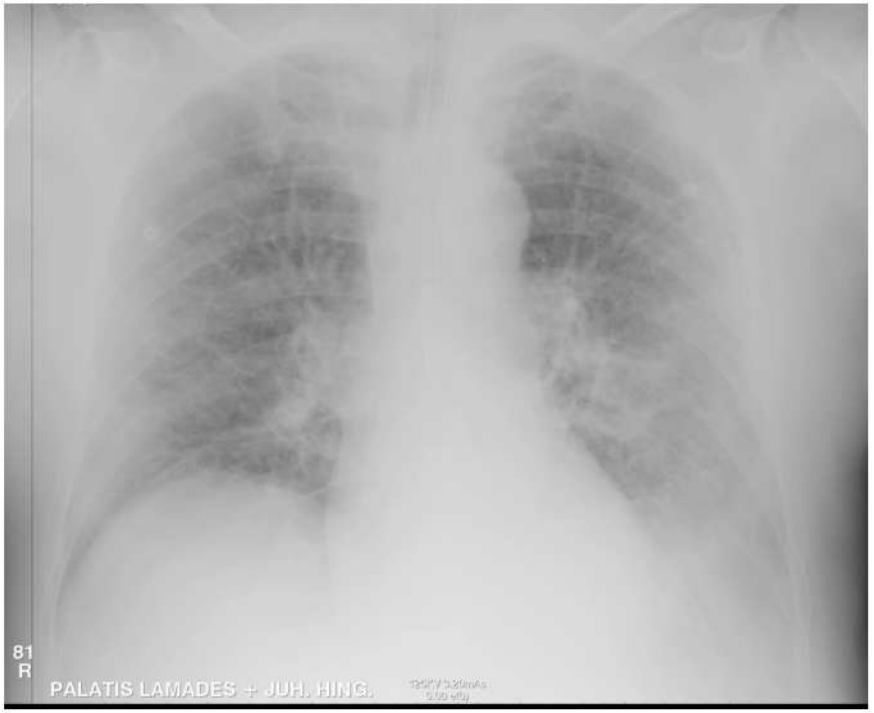


30.03

02.04

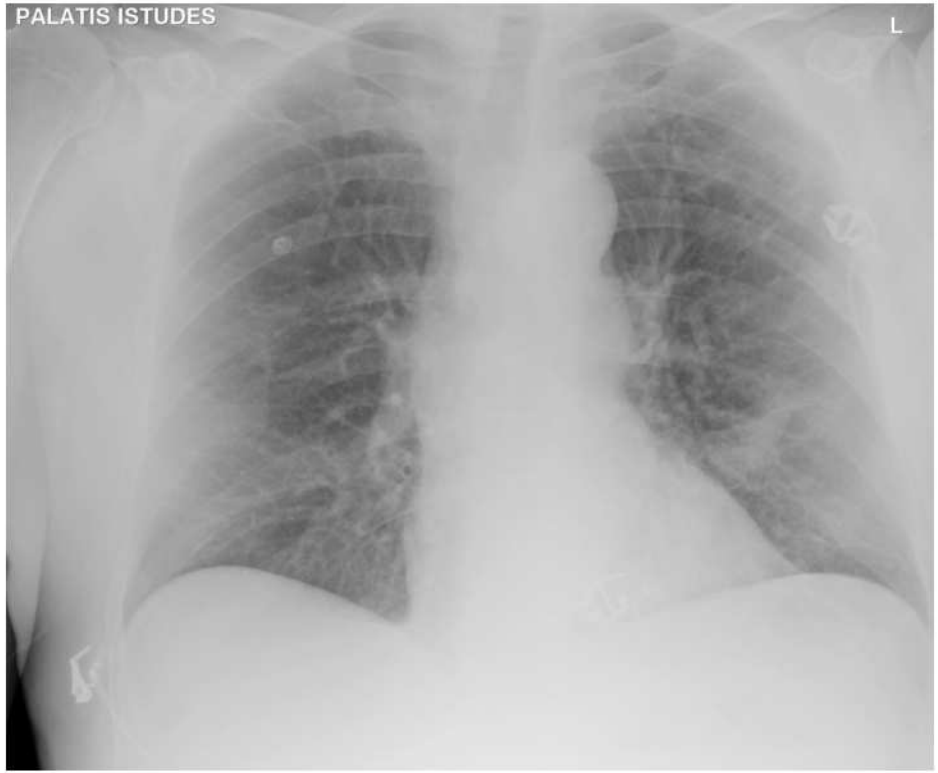
05.04

06.04

09.04

19.04

27.04



08.06

Aitäh kuulamast

Kasutatud materjalid:

Kwee TC, Kwee RM. Chest CT in COVID-19: What the Radiologist needs to Know. RadioGraphics. 23.10.2020: https://pubs.rsna.org/doi/10.1148/rg.2020200159

COVID-19 Imaging findings. Radiology Assistant. https://radiologyassistant.nl/chest/covid-19/covid19-imaging-findings

Parasher A. COVID-19: Current understanding of its pathophysiology, clinical presentation and treatment. BMJ. 25.09.2020: https://pmj.bmj.com/content/early/2020/10/06/postgradmedj-2020-138577.info