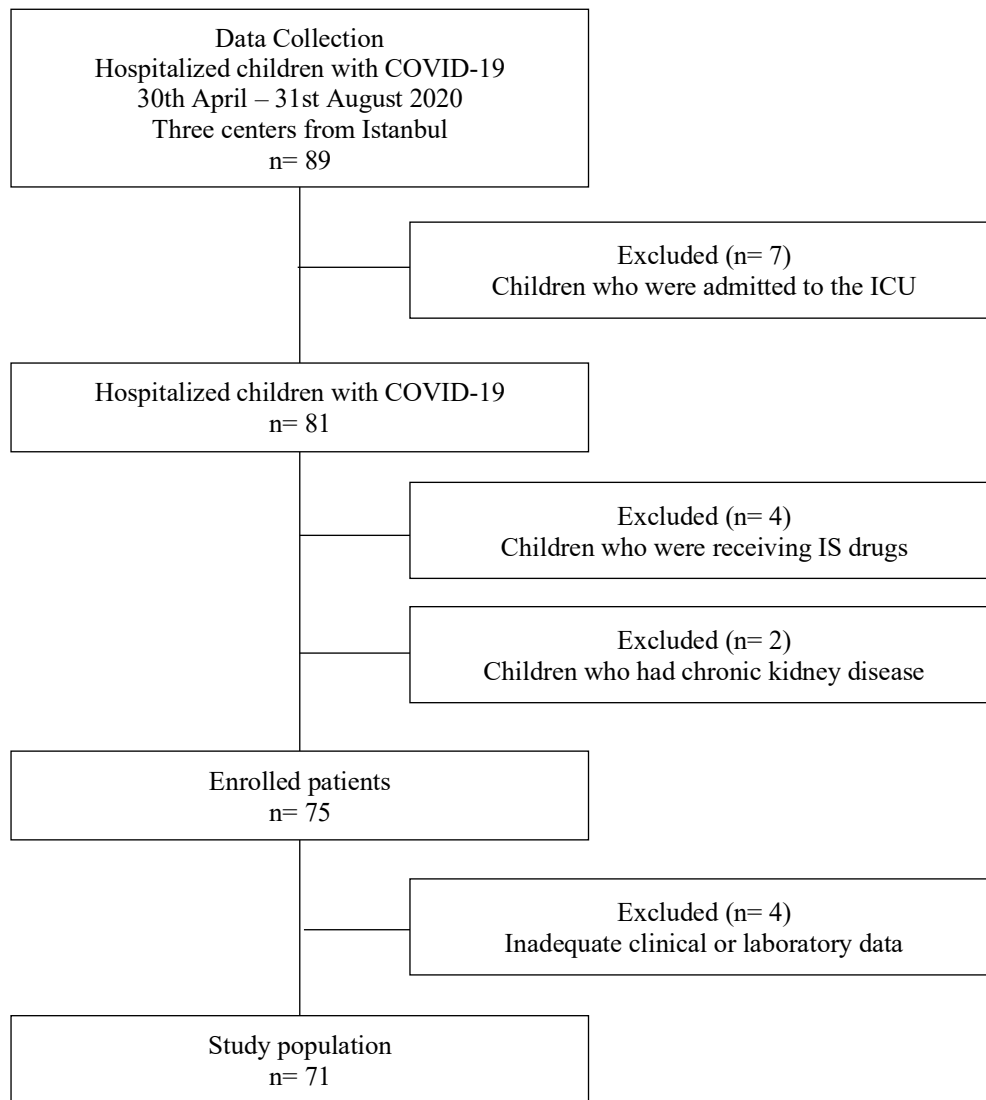


Supplemental Material 1. Flowchart of the study population



This study was conducted on children under the age of 18 years who were hospitalized but not admitted to the intensive care unit (ICU) with a diagnosis of COVID-19 in three centers in Istanbul between 30th April – 31st August 2020. *IS*, immunosuppressive.

Supplemental Material 2. Cut-off levels of urinary biomarkers and comparison with the literature

Cut-off levels of urinary biomarkers in children

Biomarker	Suppl. Reference No	Study	n (female)	Age groups (year) mean/range	Upper limit	Unit
NGAL		Present study	75 (33)	9.2 ± 4.8 (0.9-18)	315	ng/mg cr
	[1]	Rybi-Szuminska 2013*	172 (84)	0.2-5.9	33.91	ng/mg cr
				6-9.9	23.23	ng/mg cr
				10-13.9	20.29	ng/mg cr
				14-17.9	15.69	ng/mg cr
	[2]	Cangemi 2013*	308 (147)	6-73	135.8	ng/mg cr
	[3]	Pennemans 2013	338 (199)	0-10 (male)	167.3	ng/mg cr
				0-10 (female)	325.4	ng/mg cr
				11-20 (male)	139	ng/mg cr
				11-20 (female)	269.9	ng/mg cr
	[4]	McWilliam 2014*. [†]	120 (56)	1-4	128.84	ng/mg cr
				5-8	143.95	ng/mg cr
				9-12	160.83	ng/mg cr
				13-16	179.70	ng/mg cr
	[5]	Bennett 2015	368	3- <5	57.6	ng/ml
				5-<10	39.1	ng/ml
			10-<15	66.8	ng/ml	
			15-<18	74.7	ng/ml	
KIM-1		Present study	75 (33)	9.2 ± 4.8 (0.9-18)	1.24	ng/mg cr
	[3]	Pennemans 2013	338 (199)	0-10	3.61	ng/mg cr
				11-20	2.70	ng/mg cr
	[4]	McWilliam 2014*. [†]	120 (56)	1-4	2.39	ng/mg cr
				5-8	1.84	ng/mg cr
				9-12	1.42	ng/mg cr
				13-16	1.10	ng/mg cr
	[5]	Bennett 2015		3- <5	1.13	ng/ml
				5-<10	1.24	ng/ml
				10-<15	1.14 [‡]	ng/ml
			15-<18	1.88 [‡]	ng/ml	
IL-18		Present study	75 (33)	9.2 ± 4.8 (0.9-18)	1741	pg/mg cr
	[5]	Bennett 2015	368	3- <5	89.5 [‡]	pg/ml
				5-<10	54.3 [‡]	pg/ml
				10-<15	88.8 [‡]	pg/ml
			15-<18	138.9 [‡]	pg/ml	

This table shows the cut-off levels of urinary biomarkers [neutrophil gelatinase-associated lipocalin (NGAL), kidney injury molecule-1 (KIM-1), interleukin-18 (IL-18)]. This table includes the cut-off

levels for the urinary biomarker-to-creatinine ratio of healthy children in the present study (the 95th percentile of healthy children) and previous pediatric studies.

* Upper limits were given as 97.5th percentile of healthy children

† Values of UK cohort are taken into the consideration.

n, number of patients; *cr*, urine creatinine.

Supplementary References

1. Rybi-Szuminska A, Wasilewska A, Litwin M, Kulaga Z, Szuminski M (2013) Paediatric normative data for urine NGAL/creatinine ratio. *Acta Paediatr* 102:e269-272.
2. Cangemi G, Storti S, Cantinotti M, Fortunato A, Emdin M, Bruschetti M, Bugnone D, Melioli G, Clerico A (2013) Reference values for urinary neutrophil gelatinase-associated lipocalin (NGAL) in pediatric age measured with a fully automated chemiluminescent platform. *Clin Chem Lab Med* 51:1101-1105.
3. Pennemans V, Rigo JM, Faes C, Reynders C, Penders J, Swennen Q (2013) Establishment of reference values for novel urinary biomarkers for renal damage in the healthy population: are age and gender an issue? *Clin Chem Lab Med* 51:1795-1802.
4. McWilliam SJ, Antoine DJ, Sabbisetti V, Pearce RE, Jorgensen AL, Lin Y, Leeder JS, Bonventre JV, Smyth RL, Pirmohamed M (2014) Reference intervals for urinary renal injury biomarkers KIM-1 and NGAL in healthy children. *Biomark Med* 8:1189-1197.
5. Bennett MR, Nehus E, Haffner C, Ma Q, Devarajan P (2015) Pediatric reference ranges for acute kidney injury biomarkers. *Pediatr Nephrol* 30:677-685.

Supplemental Material 3. The comparison of the clinical features between the patients diagnosed with PCR positivity and with the radiological findings

	PCR positive patients (n = 40)	Patients diagnosed with radiological findings (n = 31)	p
Age (years)	10.3 ± 5.8	8.2 ± 6.5	0.16
Sex (female), n (%)	17 (42.5)	21 (67.7)	0.52
BMI-SDS	0.04 ± 1.41	0.38 ± 1.28	0.30
Systolic BP-SDS	0.44 ± 0.96	0.39 ± 0.95	0.90
Diastolic BP-SDS	0.34 ± 0.82	0.44 ± 0.82	0.75
Comorbid conditions, n (%)	8 (20)	7 (22.6)	0.51
Obesity	1	1	
Allergic asthma	3	2	
Global developmental delay	2	3	
Cures from childhood malignancy	2	0	
Type 2 diabetes mellitus	0	1	
Symptoms, n (%)			
Fever	23 (58)	19 (61)	0.81
Cough	29 (73)	15 (50)	0.08
Shortness of breath	10 (25)	4 (13)	0.24
Sore throat	5 (12.5)	5 (17)	0.74
Vomiting and/or diarrhea	3 (3)	2 (2)	0.89
Severity grading of pulmonary disease, n (%)			0.73
Grade 1- Not admitted to hospital	0	0	
Grade 2- Admitted to hospital with no respiratory support	37 (92.5)	27 (87)	
Grade 3- Admitted to hospital and required oxygen treatment	2 (5)	3 (10)	
Grade 4- Admitted to hospital and required high-flow nasal cannula oxygen	1 (2.5)	1 (3)	
Grade 5- Admitted to ICU and required invasive ventilation	0	0	
Chest imaging findings*, n (%)			
No specific radiologic findings	1 (2)	1 (3)	0.88
Unilateral /bilateral consolidation	29 (76)	23 (74)	0.84
Ground-glass opacification	6 (16)	8 (26)	0.30
Peri-bronchial thickening	2 (5)	4 (13)	0.26
Pleural effusion	2 (5)	1 (3)	0.68
Treatment, n (%)			
Hydroxychloroquine	6 (15)	6 (19)	0.75
Favipiravir	4 (10)	5 (16)	0.49
Antibiotics	1 (2.5)	1 (3)	0.86
Steroid	0	0	

*Thirty-eight of PCR positive patients had various types of chest imaging findings, all of the children with suggestive of COVID-19 had a computed tomography. Some patients showed more than one radiologic finding.

Data presented as mean \pm SD (minimum – maximum) or n (%). *SD*, standard deviation; *BMI*, body mass index; *SDS*, standard deviation score; *BP*, blood pressure; *ICU*, intensive care unit