

Supplementary table 1. Comparison of the average monthly number of clinical microbiology tests performed before and after COVID-19

Characteristic	Pre-covid(18.01-20.03)	Post-covid(20.03-22.03)	p-value*
Infrared Ray, ESR	688834.0 ± 53944.8	675409.6 ± 60072.0	0.405
Westergren, Wintrobe Tube, ESR	187860.6 ± 15699.3	175386.8 ± 12168.9	0.003
CRP (Qualitative) General Immunoassay	53729.4 ± 3973.6	48702.0 ± 3487.3	<0.001
CRP (Quantitative) Reverse Phase Immunoassay	1759.0 ± 205.4	2260.5 ± 205.9	<0.001
CRP (Quantitative) Precise Immunoassay	1412177.7 ± 122476.2	1474638.2 ± 149368.7	0.107
PCT (Qualitative) General Immunoassay	1315.6 ± 343.3	1085.4 ± 484.6	0.055
PCT (Quantitative) Precise Immunoassay	54003.9 ± 7099.2	75462.6 ± 15768.8	<0.001
Antibody-Rickettsia	21.3 ± 16.4	16.0 ± 15.6	0.243
Antigenen, Actinomyces	330.0 ± 165.2	61.9 ± 59.2	<0.001
Antigen, Bordetella pertussis	12.4 ± 9.6	7.5 ± 6.5	0.039
Antigen, Chlamydia psittaci	63.3 ± 19.7	62.9 ± 30.6	0.944
Antigen, Clostridium tetani (Tetanus)	2923.5 ± 345.2	2269.0 ± 311.0	<0.001
Antigen, Leptospira	3848.1 ± 1923.5	3325.4 ± 1773.7	0.319
Antigen, Mycoplasma	20009.5 ± 4417.5	6662.7 ± 1331.7	<0.001
Antigen, Rickettsia (R. typhi, R. rickettsii exception)	1960.4 ± 995.2	1409.1 ± 825.4	0.031
Antigen, Streptozyme	29.3 ± 25.0	2.0 ± 1.6	<0.001
Antigen, Orientia tsutsugamushi, Scrub Typhus	1554.3 ± 872.8	1558.9 ± 894.1	0.855
Antigen, Lyme disease	183.8 ± 35.6	166.5 ± 31.4	0.071
Antibody, Legionella	6344.8 ± 1183.4	5539.4 ± 507.5	0.003
Anti-streptococcus	2139.2 ± 440.3	506.1 ± 167.0	<0.001
Cryoglobulin Test	8225.2 ± 1679.6	3863.5 ± 596.5	<0.001
Q-PCR, HBV	176.5 ± 29.0	165.3 ± 45.7	0.304
Q-PCR-NM, HBV DNA	11.4 ± 5.3	21.8 ± 9.7	<0.001
Parasite Ab test, Ameba	40.9 ± 10.9	30.2 ± 9.8	0.001
Parasite Ab test, Toxoplasma	1.0 ± 1.0	0.6 ± 0.9	0.116
Parasite Ab test, IgG_Ameba	22.8 ± 10.5	11.3 ± 4.0	<0.001
Parasite Ab test, IgG_Olonorchis	2136.8 ± 221.5	2369.9 ± 263.9	0.001
Parasite Ab test, IgG_Cysticercus	1256.2 ± 184.2	1411.5 ± 194.9	0.005
Parasite Ab test, IgG_Echinococcus	8.2 ± 2.7	13.8 ± 4.6	<0.001
Parasite Ab test, IgG_Fasciola hepatica	46.2 ± 12.7	58.2 ± 14.6	0.003
Parasite Ab test, IgG_Paragonimus	1502.2 ± 224.1	1704.0 ± 218.2	0.002
Parasite Ab test, IgG_Sparganum	1164.9 ± 176.6	1302.8 ± 184.6	0.009
Parasite Ab test, IgG_Toxoplasma	2000.1 ± 424.7	2151.2 ± 256.0	0.13
Parasite Ab test, IgG_Trichinella	23.1 ± 6.8	20.5 ± 6.0	0.157
Parasite Ab test, IgG_Toxocara	1285.5 ± 161.9	1518.1 ± 180.6	<0.001
Parasite Ab test, IgM_Plasmodium	4.7 ± 3.4	4.9 ± 2.6	0.789
Parasite Ab test, IgM_Toxoplasma	2465.4 ± 160.8	2516.4 ± 184.4	0.298
ADM (Qualitative) General Immunoassay_Vancomycin	35.3 ± 7.9	21.0 ± 8.2	<0.001
ADM (Quantitative) General Immunoassay_Vancomycin	31.1 ± 2.1	3.9 ± 2.7	0.241
ADM (Quantitative) Precise Immunoassay_Amikacin	147.7 ± 34.5	167.8 ± 45.2	0.079
ADM (Quantitative) Precise Immunoassay_Gentamicin	36.0 ± 9.0	34.1 ± 9.8	0.477
ADM (Quantitative) Precise Immunoassay_Tobramycin	4.9 ± 3.3	6.1 ± 9.8	0.555
ADM (Quantitative) Precise Immunoassay_Vancomycin	4377.1 ± 822.8	4203.3 ± 603.8	0.396
ADM (Quantitative) LC-MS/MS_Itraconazole	27.3 ± 6.8	31.7 ± 5.6	0.016
ADM (Quantitative) LC-MS/MS_Posaconazole	117.8 ± 29.5	139.1 ± 32.8	0.019
ADM (Quantitative) LC-MS/MS_Teicoplanin	90.6 ± 24.0	92.5 ± 23.2	0.775
ADM (Quantitative) LC-MS/MS_Voriconazole	320.2 ± 54.5	376.3 ± 94.9	0.014
Microscope-fluorescent	1689.9 ± 557.6	669.3 ± 78.1	<0.001
OBS Microscopy- Stain_Wet Smear, vaginal	19831.8 ± 4562.9	23724.7 ± 2731.7	0.001
Gram stain	360060.0 ± 29714.8	363366.4 ± 25930.6	0.005
DIP stain	88.4 ± 19.3	88.4 ± 32.5	0.262
Microscopy stain	7081.7 ± 604.2	6457.2 ± 500.6	<0.001
Microscopy stain, Capsule	694.3 ± 123.0	498.4 ± 64.4	<0.001
Semi-quantitative Culture	1480.1 ± 386.7	1320.6 ± 309.5	0.111
Culture and identification	35567.2 ± 2985.5	90095.7 ± 86513.2	0.004
Special Culture, Chlamydia	236.7 ± 25.7	200.4 ± 47.3	0.002
Special Culture, Legionella	129.1 ± 50.2	158.5 ± 31.7	0.016
Special Culture, Yersinia	4.2 ± 3.4	8.9 ± 6.5	0.003
Special Culture, Mycoplasma ureaplasma	7061.9 ± 780.9	5692.3 ± 487.9	<0.001
Special Culture, Campylobacter	15.3 ± 8.1	40.4 ± 17.0	<0.001
Special Culture, Clostridium difficile	5765.9 ± 871.9	5311.0 ± 764.2	0.054
Special Culture, Mycoplasma pneumoniae	4865.7 ± 745.6	1940.6 ± 1561.5	<0.001
Culture, Agglutination	315.8 ± 76.2	207.9 ± 31.1	<0.001
Culture, Latex Agglutination Test	1294.0 ± 169.3	1001.0 ± 237.4	<0.001
ASO Test, General immune test (qualitative)	15273.4 ± 1676.6	12494.8 ± 1169.9	<0.001
ASO Test, General immune test (quantitative)	882.0 ± 161.4	369.9 ± 88.2	<0.001
ASO Test, Precise immune test (quantitative)	34498.2 ± 4402.9	25292.2 ± 3100.0	<0.001
Culture, AST	920.8 ± 90.5	887.4 ± 70.0	0.146
Culture, AST_Modified Hodge Test	374.5 ± 67.4	667.4 ± 189.2	<0.001
Culture, AST (MIC)	5135.8 ± 674.3	3822.4 ± 334.7	<0.001
Willi-Erichia	0.5 ± 0.9	3.6 ± 8.4	0.071
Culture, AST (disk diffusion method)	2641.0 ± 2030.6	26758.0 ± 1473.8	0.492
Culture AST (disk diffusion method) (anaerobic culture conducted simultaneously)	3910.8 ± 620.1	2633.2 ± 214.0	<0.001
Culture AST (minimum inhibitory concentration)	287650.3 ± 27228.6	293530.9 ± 26683.9	0.44
Culture AST (minimum inhibitory concentration) (anaerobic culture conducted simultaneously)	127199.7 ± 12546.0	108517.6 ± 8709.1	<0.001
Widal Test	11525.2 ± 1721.0	7789.1 ± 1201.3	<0.001
Culture-Antimicrobial combination test (double disk diffusion method)	318.3 ± 62.5	370.3 ± 103.6	0.037
Culture-Antimicrobial combination test (checkerboard method, time-kill curve method)	4.4 ± 2.8	5.3 ± 2.7	0.097
Immunological test-bacterial antigen_Chlamydia	57.8 ± 135.7	3.0 ± 1.4	<0.001
Immunological test, bacterial antigen_Legionella	88.5 ± 55.9	20.5 ± 7.1	<0.001
Immunological test, bacterial antigen_Leptospira	404.5 ± 271.1	490.2 ± 420.8	0.395
Immunological test, bacterial antigen, IgG_Chlamydia	1408.7 ± 360.1	1019.0 ± 120.0	<0.001
Immunological test, bacterial antigen_Chlamydia trachomatis	145.7 ± 23.4	261.2 ± 61.5	<0.001
Immunological test, bacterial antigen, IgM_Mycoplasma	4427.1 ± 1090.3	3388.0 ± 487.1	<0.001
Immunological test, bacterial antigen, IgG_Rickettsia	607.2 ± 270.7	441.4 ± 247.3	0.027
Immunological test, bacterial antigen, IgG_Murine Typhus	254.2 ± 165.4	276.5 ± 209.9	0.674
Immunological test, bacterial antigen, IgG_Orientia tsutsugamushi	1183.8 ± 723.0	1178.4 ± 957.8	0.982
Immunological test, bacterial antigen, IgM_Chlamydia	4017.7 ± 771.0	2894.6 ± 194.3	<0.001
Immunological test, bacterial antigen, IgM_Chlamydia trachomatis	217.4 ± 70.1	174.3 ± 31.4	0.007
Immunological test, bacterial antigen, IgM_Rickettsia	28.7 ± 31.6	28.5 ± 24.7	0.793
Immunological test, bacterial antigen, IgM_Murine Typhus	351.9 ± 43.7	251.2 ± 45.9	<0.001
Immunological test, bacterial antigen, IgM_Orientia tsutsugamushi	61.1 ± 51.7	95.0 ± 114.3	0.184
Immunological test, bacterial antigen, IgM_Mycoplasma	43195.4 ± 10576.1	20058.4 ± 4466.2	<0.001
Immunofluorescence, antibody typhoid fever	1.7 ± 1.7	2.8 ± 2.8	0.129
Warthin-Starry silver stain for Helicobacter pylori	4286.7 ± 1303.3	5363.5 ± 1270.1	0.004
CLO test, Helicobacter pylori	59069.5 ± 17015.2	76767.6 ± 18924.3	0.001
Culture, Helicobacter pylori test-Endoscopy-Culture	67.5 ± 14.8	130.5 ± 28.3	<0.001
Antibody, Helicobacter pylori test	5476.0 ± 994.4	6680.8 ± 1040.6	<0.001
Stool Antigen, Helicobacter pylori test	63.3 ± 16.7	61.6 ± 18.4	0.718
Breath Test, Helicobacter pylori test	16986.8 ± 4295.0	26462.0 ± 5510.1	<0.001
Helicobacter pylori Test, PCR-based helicobacter pylori genotyping pylori genotyping	19.4 ± 5.8	10.2 ± 5.9	<0.001
Toxin, Clostridium Difficile	13954.5 ± 2262.7	12786.9 ± 1421.5	0.032
Toxin, Clostridium Difficile toxins A-B	3373.4 ± 1180.4	4749.0 ± 620.8	<0.001
Toxin, Clostridium difficile Glutamyl Transferase Hydrolase	1092.5 ± 281.3	1397.0 ± 217.0	<0.001
PCR, Bordetella pertussis	604.2 ± 174.8	333.1 ± 35.6	<0.001
PCR, Borrelia burgdorferi	12.1 ± 4.3	4.7 ± 5.1	<0.001
PCR, Chlamydia pneumoniae	470.2 ± 206.8	217.6 ± 34.9	<0.001
PCR, Chlamydia trachomatis	2812.0 ± 398.4	2424.6 ± 300.2	<0.001
PCR, Gardnerella vaginalis	8083.1 ± 1444.3	8889.7 ± 669.0	0.014
PCR, Haemophilus ducreyi	854.0 ± 137.1	1229.4 ± 157.7	<0.001
PCR, Helicobacter pylori	2675.1 ± 727.1	2082.9 ± 721.2	0.006
PCR, Legionella pneumophila	395.7 ± 91.4	411.4 ± 48.6	0.445
PCR, Mycoplasma genitalium	910.9 ± 207.7	871.5 ± 92.2	0.384
PCR, Mycoplasma hominis	1458.7 ± 168.9	899.1 ± 148.7	<0.001
PCR, Neisseria gonorrhoeae	650.2 ± 175.2	709.3 ± 72.3	0.122
PCR, Salmonella	115.2 ± 53.5	71.3 ± 56.6	0.006
PCR, Ureaplasma species (Ureaplasma urealyticum, Ureaplasma parvum)	4985.5 ± 1140.5	5375.2 ± 501.7	0.121
PCR, Escherichia coli O157	3506.2 ± 373.4	2353.4 ± 312.7	<0.001
PCR, Mycoplasma pneumoniae	1368.5 ± 302.8	578.9 ± 78.3	<0.001
PCR, Chlamydia	266.0 ± 71.7	208.9 ± 37.1	0.001

Characteristic	Pre-covid(18.01-20.02)	Post-covid(20.03-22.03)	p-value*
RT-PCR, Mycoplasma pneumoniae	355.7 ± 173.6	353.7 ± 57.8	0.956
PCR, Helicobacter pylori Clarithromycin-Resistant Mutations	1059.3 ± 354.7	1551.2 ± 474.2	<0.001
PCR, Vancomycin-Resistant Enterococci (VRE) Genotype	277.9 ± 182.3	87.8 ± 29.5	<0.001
PCR, KPC, NDM, VIM, IMP Genes (Each Gene Determination)	134.7 ± 51.9	142.8 ± 37.0	0.525
Antimicrobial Susceptibility Testing (Staining)	7052.4 ± 1187.7	3976.9 ± 386.6	<0.001
Colony Counting Antimicrobial Susceptibility Test (Staining)	7164.7 ± 1126.9	4534.2 ± 364.0	<0.001
Acid-fast Staining Bacteriological Examination	57663.3 ± 6012.7	46822.8 ± 3397.2	<0.001
Culture and identification for acid-fast bacilli (solid media)	56642.3 ± 5990.4	44977.8 ± 3400.6	<0.001
Culture and identification for acid-fast bacilli (liquid media)	49648.2 ± 4966.3	41289.0 ± 3240.9	<0.001
Antimicrobial susceptibility testing (regardless of drug concentration) for acid-fast bacilli (solid media)	3670.8 ± 533.4	2002.4 ± 205.2	<0.001
Antimicrobial susceptibility testing (regardless of drug concentration) for acid-fast bacilli (liquid media)	103.8 ± 20.0	85.9 ± 15.0	0.001
Tuberculosis-specific antigen stimulation interferon-gamma	9922.9 ± 1296.2	11192.7 ± 1346.8	0.001
Tuberculosis general immune test	6.2 ± 7.1	1.0 ± 1.0	0.001
PCR, Tuberculosis Bacteria	1686.6 ± 200.8	1383.1 ± 191.3	<0.001
PCR, Non-tuberculosis Acid-fast Bacteriology Identification Test	2004.0 ± 195.5	2141.0 ± 246.4	0.032
PCR, Non-tuberculosis Acid-fast Bacteriology Identification Test (Restriction Enzyme Cleavage Length Polymorphism Method)	157.8 ± 61.4	52.1 ± 12.1	<0.001
PCR, Non-tuberculosis Acid-fast Bacteria	45.3 ± 11.3	53.9 ± 11.6	0.011
PCR, Tuberculosis Bacteria	2197.7 ± 247.2	1811.5 ± 138.9	<0.001
PCR, Tuberculosis Bacteria	28157.3 ± 3275.4	22207.8 ± 1720.0	<0.001
PCR, Anti-tuberculosis Drug Resistant Tuberculosis Bacteria Test (Rifampin)	855.2 ± 83.5	897.0 ± 139.1	0.203
PCR, Tuberculosis Bacteria Test (isoniazid)	841.4 ± 82.9	890.8 ± 144.1	0.144
RT-PCR, Tuberculosis bacilli and resistance to Rifampin	5578.9 ± 1588.2	7455.7 ± 990.0	<0.001
Fungal Examination, Smear and Gram staining	29983.3 ± 3454.4	24984.9 ± 3050.3	<0.001
Fungal Examination, KOH Smear-Skin	39869.2 ± 8262.3	36093.6 ± 7523.4	0.095
Fungal Examination, KOH Smear-Exudate	1273.9 ± 395.9	2991.6 ± 806.2	<0.001
Fungal Examination, Chemical Reaction-Instrumental Measurement[(1-3)-β-D-Glucan	1704.3 ± 755.5	2830.5 ± 606.9	<0.001
Fungal Antigen, Cryptococcus	52.2 ± 10.0	52.3 ± 14.3	0.971
Fungal Antigen, Aspergillus (Galactomannan)	5226.9 ± 724.5	7229.2 ± 1395.6	<0.001
Fungal Antigen, Candida	3.7 ± 2.5	3.2 ± 2.2	0.537
Fungal Antigen, Aspergillus	688.7 ± 81.9	343.7 ± 371.9	<0.001
Fungal Antibody, Cryptococcus	33.4 ± 8.1	21.6 ± 8.3	<0.001
Fungal Antibody, Aspergillus	721.3 ± 108.2	942.9 ± 131.4	<0.001
PCR, Fungus rDNA	62.8 ± 16.0	77.8 ± 13.8	0.001
PCR, Pneumocystis jirovecii	1654.0 ± 241.2	2264.5 ± 403.0	<0.001
Microscopy, Urinalysis Sediment (Direct Smear Method)	5876.0 ± 733.6	4210.5 ± 679.4	<0.001
Microscopy, Urinalysis Sediment (Centrifugation Method)	13820.7 ± 1572.3	10875.2 ± 1436.3	<0.001
Microscopy, Yeast Sediment (Scatch Tape Method)	127.7 ± 32.2	71.6 ± 15.3	<0.001
Microscopy, Parasite Sediment (Centrifugation Method)	2209.1 ± 232.0	1624.8 ± 251.1	<0.001
Microscopy, Urinalysis Organic Matter (Including Nutritional and Fatty Forms)	13995.8 ± 1689.0	10524.2 ± 1437.5	<0.001
Microscopy, Urinalysis General Staining	1634.4 ± 167.9	1114.3 ± 218.6	<0.001
Microscopy, Urinalysis Special Staining	521.9 ± 83.8	559.0 ± 100.9	0.159
Microscopy, Parasite Counting	228.4 ± 35.8	164.4 ± 27.0	<0.001
Microscopy, Blood Parasite Examination (Blood Smear)	978.2 ± 376.8	592.5 ± 211.3	<0.001
Microscopy, Skin Parasites-General	826.8 ± 141.9	836.3 ± 120.9	0.8
Microscopy, Skin Parasites-KOH Smear	1806.1 ± 355.3	1848.7 ± 284.2	0.639
PCR, Plasmodium	72.1 ± 35.8	52.2 ± 25.2	0.027
PCR, Toxoplasma	74.8 ± 10.6	82.6 ± 15.3	0.038
PCR, Trichomonas vaginalis	133.0 ± 23.6	123.4 ± 15.4	0.093
Virus Culture	1462.0 ± 334.8	1288.0 ± 155.8	0.022
Virus Antibody, Adenovirus	15.3 ± 22.3	1.4 ± 1.4	0.004
Virus Antibody, Epstein-Barr Virus (EBV) - Early Antigen	1.2 ± 2.0	1.6 ± 1.4	0.315
Virus Antibody, Epstein-Barr Virus (EBV) - Nuclear Antigen	0.5 ± 0.6	1.3 ± 1.2	0.062
Virus Antibody, Epstein-Barr Virus (EBV) - Viral Capsid	1.5 ± 1.3	3.5 ± 2.5	0.001
Virus Antibody, Herpes Simplex Virus (HSV) (Type 1, 2)	3.7 ± 3.7	4.4 ± 3.5	0.459
Virus Antibody, Measles Virus	6.5 ± 8.2	7.2 ± 7.3	0.762
Virus Antibody, Mumps Virus	7.8 ± 9.8	8.2 ± 7.3	0.885
Virus Antibody, Respiratory Syncytial Virus	75.0 ± 42.2	28.3 ± 18.8	<0.001
Virus Antibody, Rotavirus	323.0 ± 95.9	262.3 ± 74.9	0.015
Virus Antibody, Rubella Virus	27.9 ± 11.6	28.6 ± 7.4	0.793
Virus Antibody, Varicella-Zoster Virus (VZV)	15.8 ± 8.3	23.6 ± 7.3	0.001
Virus Antibody, Hantaan virus	3017.1 ± 1564.6	2560.9 ± 1459.7	0.287
Virus Antigens, Adenovirus	670.3 ± 112.2	294.9 ± 66.6	<0.001
Virus Antigens, Epstein-Barr Virus (EBV) - Early Antigen	3.2 ± 3.0	3.8 ± 2.7	0.454
Virus Antigens, Herpes Simplex Virus (HSV) (Type 1, 2)	2.2 ± 2.6	2.5 ± 4.5	0.027
Virus Antigens, Mumps Virus	6.9 ± 5.0	3.8 ± 2.0	0.006
Virus Antigens, Norovirus	2314.5 ± 406.7	1112.7 ± 160.2	<0.001
Virus Antigens, Respiratory Syncytial Virus	699.3 ± 511.9	92.1 ± 92.8	<0.001
Virus Antigens, Rotavirus	3510.7 ± 835.3	1668.4 ± 226.2	<0.001
Virus Antigens, Rubella Virus	66.7 ± 23.4	34.3 ± 10.5	<0.001
Virus Antigens, Varicella-Zoster Virus (VZV)	4.9 ± 2.3	6.3 ± 3.4	0.093
Virus Antigens, Cytomegalovirus (CMV)	1028.1 ± 88.4	1030.7 ± 68.6	0.907
Virus Antigens, Hantaan Virus	16.5 ± 6.0	19.1 ± 8.9	0.236
Virus Antibody-IgG, Adenovirus	143.3 ± 64.1	60.8 ± 13.4	<0.001
Virus Antibody-IgG, Coxsackievirus A (Type 2, 3, 4, 6, 7, 9, 10, 16)	2.0 ± 1.9	1.0 ± 1.3	0.022
Virus Antibody-IgG, Epstein-Barr Virus (EBV)-Early Antigen	1304.7 ± 143.8	1256.6 ± 144.7	0.24
Virus Antibody-IgG, Epstein-Barr Virus (EBV)-Nuclear Antigen	1763.0 ± 198.8	1780.2 ± 217.1	0.77
Virus Antibody-IgG, Epstein-Barr Virus (EBV)-Viral Capsid	2727.5 ± 302.8	2958.3 ± 357.0	0.016
Virus Antibody-IgG, Herpes Simplex Virus (HSV) (Type 1, 2)	3985.8 ± 631.3	5518.2 ± 663.1	<0.001
Virus Antibody-IgG, Measles Virus	1228.0 ± 1277.7	809.4 ± 127.2	0.109
Virus Antibody-IgG, Mumps Virus	1251.2 ± 247.6	1127.0 ± 151.9	0.036
Virus Antibody-IgG, Respiratory Syncytial Virus	6.9 ± 13.2	3.3 ± 3.0	0.187
Virus Antibody-IgG, Rotavirus	42.9 ± 13.4	14.3 ± 4.7	<0.001
Virus Antibody-IgG, Rubella Virus	18798.1 ± 1222.7	20675.2 ± 958.9	<0.001
Virus Antibody-IgG, Varicella-Zoster Virus (VZV)	3752.8 ± 403.1	4272.1 ± 611.1	0.001
Virus Antibody-IgG, Cytomegalovirus (CMV)	3012.2 ± 297.2	3306.0 ± 350.7	0.002
Virus Antibody-IgG, Human T-Lymphotropic Virus Type I, II, III (HTLV-I, II, III)	198.2 ± 32.4	173.3 ± 23.3	0.003
Virus Antibody-IgG, Parvovirus B19	1.0 ± 1.5	1.7 ± 1.3	0.071
Virus Antibody-IgG, Hantaan virus	534.3 ± 196.5	279.5 ± 179.1	<0.001
Virus Antibody-IgM, Adenovirus	340.6 ± 101.8	138.8 ± 17.5	<0.001
Virus Antibody-IgM, Coxsackievirus A (Type 2, 3, 4, 6, 7, 9, 10, 16)	3.1 ± 2.3	1.2 ± 1.2	0.001
Virus Antibody-IgM, Echovirus (Type 3, 6, 7, 9, 11, 12)	0.1 ± 0.5	0 ± 0.3	0.135
Virus Antibody-IgM, Epstein-Barr Virus (EBV)-Early Antigen	1276.3 ± 147.6	1147.0 ± 153.7	0.004
Virus Antibody-IgM, Epstein-Barr Virus (EBV)-Nuclear Antigen	494.0 ± 67.3	571.2 ± 92.9	0.001
Virus Antibody-IgM, Epstein-Barr Virus (EBV)-Viral Capsid	4999.8 ± 622.2	4591.8 ± 618.9	0.023
Virus Antibody-IgM, Herpes Simplex Virus (HSV) (Type 1, 2)	5125.6 ± 479.1	5723.8 ± 556.8	<0.001
Virus Antibody-IgM, Measles Virus	557.4 ± 343.6	313.9 ± 44.5	0.001
Virus Antibody-IgM, Mumps Virus	1429.1 ± 293.0	1024.9 ± 191.0	<0.001
Virus Antibody-IgM, Respiratory Syncytial Virus	389.9 ± 93.8	111.9 ± 91.8	<0.001
Virus Antibody-IgM, Varicella-Zoster Virus (VZV)	19671.6 ± 1265.5	21217.8 ± 977.6	<0.001
Virus Antibody-IgM, Cytomegalovirus (CMV)	3974.0 ± 314.9	3878.0 ± 374.6	0.326
Virus Antibody-IgM, Cytomegalovirus (CMV)	5396.6 ± 430.8	5265.6 ± 500.3	0.32
Virus Antibody-IgM, Human T-Lymphotropic Virus Type I, II, III (HTLV-I, II, III)	13.8 ± 6.7	17.0 ± 5.6	0.071
Virus Antibody-IgM, Parvovirus B19	1.2 ± 1	1 ± 0.9	0.745
Immunofluorescence Assay, Adenovirus Virus Antigen	249.4 ± 96.8	63.2 ± 15.1	<0.001
Immunofluorescence Assay, Epstein-Barr Virus (EBV)-Early Antigen	1.6 ± 1.5	3.4 ± 2.5	0.004
Immunofluorescence Assay, Epstein-Barr Virus (EBV)-Nuclear Antigen	1.0 ± 1.2	3.1 ± 2.4	<0.001
Immunofluorescence Assay, Epstein-Barr Virus (EBV)-Viral Capsid	1.6 ± 1.7	2.1 ± 1.5	0.302
Immunofluorescence Assay, Herpes Simplex Virus (HSV) (Type 1, 2)	44.9 ± 19.0	37.2 ± 47.5	0.454
Immunofluorescence Assay, Influenza virus A	613.5 ± 653.9	14.1 ± 5.3	<0.001
Immunofluorescence Assay, Influenza virus B	608.2 ± 653.4	12.8 ± 5.1	<0.001
Immunofluorescence Assay, Mumps Virus Antigen	8.3 ± 3.3	3.3 ± 2.3	<0.001
Immunofluorescence Assay, Parainfluenza virus Antigen	37.0 ± 25.3	32.2 ± 63.6	0.725
Immunofluorescence Assay, Respiratory Syncytial Virus Antigen	894.0 ± 528.8	145.9 ± 109.8	<0.001
Immunofluorescence Assay, Rotavirus Antigen	292.5 ± 142.1	176.0 ± 48.0	<0.001
Immunofluorescence Assay, Rubella Virus Antigen	12.1 ± 4.0	7.5 ± 3.3	<0.001
Immunofluorescence Assay, Varicella-Zoster Virus (VZV) Antigen	21.8 ± 6.1	14.3 ± 5.3	<0.001
Immunofluorescence Assay, Cytomegalovirus (CMV) Antigen	1499.6 ± 386.9	1024.9 ± 99.6	<0.001
Immunofluorescence Assay, Hantaan virus Antigen	3.4 ± 4.5	1.4 ± 1.6	0.041
Serological test, Coxsackievirus B (Type 1, 2, 3, 4, 5, 6) IgG antibodies	1.9 ± 1.6	2.9 ± 2.3	0.078
Serological test, Echovirus (Type 1,3,4,5,6,7,9,11,12,13,16,17,18,19,20,21,24,25,30) IgG antibodies	1.2 ± 1.5	1.6 ± 1.6	0.363

Characteristic	Pre-covid(18.01-20.02)	Post-covid(20.03-22.03)	p-value*
Serological test Enterovirus (Type 70,71) IgG antibodies	1.4 ± 1.5	1.4 ± 1.5	0.894
Serological test Herpes Simplex Virus (HSV) (Type 1,2) IgG antibodies	10.8 ± 9.0	24.6 ± 13.9	<0.001
Serological test Herpes Simplex Virus (HSV) (Type 1,2) IgM antibodies	0.7 ± 0.7	0.4 ± 0.6	0.502
Western blot Rubella Virus IgG antibodies	10.5 ± 4.2	6.2 ± 2.2	<0.001
Western blot IgM Rubella Virus	9.9 ± 4.1	6.0 ± 2.2	<0.001
PCR, Adenovirus	19.6 ± 10.0	10.4 ± 3.7	<0.001
PCR, BK Virus	568.5 ± 61.6	482.0 ± 49.8	<0.001
PCR, EBV	975.5 ± 121.9	704.4 ± 83.3	<0.001
PCR, Herpes Simplex Virus (HSV) (Type 1,2)	3261.4 ± 371.1	2500.4 ± 255.2	<0.001
PCR, Human Herpesvirus (HHV) (Type 6,7,8)	364.3 ± 49.8	335.3 ± 39.2	0.026
PCR, JC Virus	228.2 ± 28.3	241.6 ± 34.3	0.134
PCR, Varicella-Zoster Virus	1453.4 ± 173.5	1429.3 ± 193.0	0.64
PCR, CMV	952.2 ± 142.9	716.1 ± 81.4	<0.001
PCR, HPV	305.2 ± 44.8	305.0 ± 57.2	0.939
PCR, Parvovirus B19	370.5 ± 48.1	352.5 ± 41.5	0.159
RT-PCR, Enterovirus	1978.4 ± 964.1	630.7 ± 123.5	<0.001
PCR, Epstein-Barr Virus (EBV)	0.6 ± 1.3	38.0 ± 27.9	<0.001
RT-PCR, Mumps Virus	61.4 ± 20.8	65.7 ± 20.0	0.453
RT-PCR, Rubella Virus	32.5 ± 7.2	28.0 ± 6.3	0.024
PCR, Varicella-Zoster Virus (VZV)	3.2 ± 2.2	35.6 ± 22.6	<0.001
RT-PCR, CMV	765.7 ± 119.4	861.9 ± 92.3	0.002
PCR, CMV	5.3 ± 1.6	8.4 ± 5.2	0.007
PCR, Human Papillomavirus (HPV)	11.0 ± 17.4	3.8 ± 3.7	0.047
RT-PCR, Human T-Lymphotropic Virus Type I, II, III, HTLV-I, II, III	18.4 ± 8.5	9.2 ± 5.8	<0.001
RT-PCR, Zika virus	71.5 ± 23.1	1.7 ± 2.2	<0.001
RT-PCR, Severe fever with thrombocytopenia syndrome virus	15.7 ± 11.6	61.5 ± 39.6	<0.001
RT-PCR, Hantaan virus	15.7 ± 10.0	14.8 ± 9.6	0.747
RT-PCR, BK virus	2296.0 ± 370.8	3414.0 ± 346.7	<0.001
RT-PCR, Epstein-Barr Virus	2568.1 ± 291.8	3494.0 ± 429.2	<0.001
RT-PCR, Cytomegalovirus	6278.8 ± 884.1	8771.4 ± 970.8	<0.001
RT-PCR, Parvovirus B19 (Parvovirus B19)	32.9 ± 9.2	32.6 ± 9.6	0.903
Human Papillomavirus [Hybrid Capture Assay]	1182.3 ± 135.2	799.0 ± 130.8	<0.001
PCR-RELP, Human Papillomavirus (HPV)	13.7 ± 4.9	17.2 ± 4.4	0.01
RT-PCR, Human Papillomavirus (HPV)	16466.7 ± 2510.3	20847.8 ± 2291.0	<0.001
RT-PCR, Human Papillomavirus (HPV) [Inverter Method]	2.9 ± 2.5	6.9 ± 2.6	<0.001
RT-PCR, Human Papillomavirus(HPV)	308.0 ± 69.5	196.5 ± 27.7	<0.001
PCR-REMP, Human Papillomavirus (HPV)	1320.3 ± 279.7	1321.8 ± 267.5	0.985
RT-PCR, Human Papillomavirus (HPV)	1336.4 ± 243.9	2290.4 ± 371.9	<0.001
Nuclear Acid Detection, Homology Detection Group: Adenovirus	20.6 ± 5.5	24.4 ± 6.1	0.023
Nuclear Acid Detection, Homology Detection Group: Epstein-Barr Virus	1768.7 ± 218.7	2102.6 ± 284.6	<0.001
Nuclear Acid Detection, Homology Detection Group: Human Papillomavirus	43.2 ± 7.6	67.0 ± 15.5	<0.001
Nuclear Acid Detection, Human Papillomavirus (HPV) [DNA Microarray Method]	2448.9 ± 541.8	1886.4 ± 251.2	<0.001
Nuclear Acid Detection, Gene Type Group 1: Human Papillomavirus [PNA Microarray Method]	116.7 ± 19.3	95.5 ± 20.0	<0.001
Nuclear Acid Detection, Gene Type Group 1: Human Papillomavirus [Bidirectional Microarray Method]	7517.5 ± 853.5	7840.1 ± 759.5	0.161
NAATs, Mixed Group 1: Acute Diarrhea Causing Virus	11265.8 ± 1772.2	13435.4 ± 3503.4	0.009
NAATs, Mixed Group 1: Acute Diarrhea Causing Bacteria	5163.0 ± 395.4	2509.2 ± 596.9	0.002
NAATs, Mixed Group 1: Bacterial Causes of Meningitis/Encephalitis	824.6 ± 225.6	540.7 ± 64.5	<0.001
NAATs, Mixed Group 1: Bacterial Causes of Pneumonia	20375.6 ± 14604.7	16906.6 ± 5221.6	0.264
NAATs, Mixed Group 1: Respiratory Pathogens (Viruses, Bacterial Causes of Pneumonia)	6318.7 ± 8916.1	33.9 ± 22.8	0.001
NAATs, mixed group 1: Respiratory virus	559.6 ± 291.4	156.5 ± 55.3	<0.001
NAATs, mixed group 1: Meningoencephalitis/Encephalitis caused by viruses	194.0 ± 118.5	206.1 ± 29.1	0.616
NAATs, mixed group 2: Acute diarrhea caused by viruses	15224.2 ± 15316.0	5747.4 ± 419.8	0.004
NAATs, mixed group 2: Acute diarrhea caused by bacteria	70876.8 ± 63427.8	31084.4 ± 3738.5	0.004
NAATs, mixed group 2: Respiratory virus	1596.7 ± 1286.9	1876.9 ± 237.8	0.285
Venereal Disease Research Laboratory test, Syphilis reaction test (VDRL, RPR, ART)	192004.1 ± 14340.4	173248.1 ± 11280.2	<0.001
Venereal Disease Research Laboratory test, Syphilis reaction test (Reverse passive hemagglutination)	18339.6 ± 1397.9	17744.5 ± 1493.2	0.148
Venereal Disease Research Laboratory test, Syphilis reaction test [Precise immune test]	222729.1 ± 21138.7	250498.8 ± 22848.7	<0.001
Treponema pallidum test, Syphilis detection by hemagglutination [General immune test]	1956.5 ± 201.2	1689.5 ± 132.6	<0.001
Treponema pallidum Serological Test, Treponema pallidum Hemagglutination Absorption Test [Immuno-globulin Test] (Reverse Serology)	689.6 ± 68.0	746.0 ± 97.9	0.02
Treponema pallidum Serological Test, Treponema pallidum Antibody	14478.8 ± 1312.7	14652.7 ± 1109.5	0.612
Treponema pallidum Serological Test, Fluorescent Treponema Antibody Absorption Test [Immunofluorescence Method]	3146.0 ± 309.0	3212.7 ± 364.6	0.484
Treponema pallidum Serological Test, Fluorescent Treponema Antibody Absorption Test [Immunofluorescence Method] (Reverse Serology)	79.4 ± 14.9	60.3 ± 9.7	<0.001
NAATs, Group 1 Syphilis	478.5 ± 62.3	639.2 ± 135.2	<0.001
General Immunoglobulin Test, B Hepatitis Surface Antigen (Qualitative)	342003.6 ± 24876.8	317697.0 ± 21596.5	0.001
General Immunoglobulin Test, B Hepatitis Antibody	295568.1 ± 22285.4	276284.8 ± 19177.1	0.002
General Immunoglobulin Test, B Hepatitis e Antigen	965.8 ± 173.8	760.1 ± 148.0	<0.001
General Immunoglobulin Test, B Hepatitis e Antibody	444.3 ± 100.0	374.6 ± 77.4	0.008
General Immune Test, C-Type Hepatitis Antibody	60930.1 ± 6044.7	64650.4 ± 5209.9	0.023
A-Type Hepatitis Antibody (IgG)	20504.9 ± 7977.0	28013.3 ± 3595.6	<0.001
A-Type Hepatitis Antibody (IgM)	19547.2 ± 4663.3	20909.8 ± 1949.4	0.18
Advanced Immune Test, A-Type Hepatitis Antibody - Nucleic Acid Method (IgG)	1175.0 ± 265.7	1238.1 ± 133.1	0.288
Advanced Immune Test, A-Type Hepatitis Antibody - Nucleic Acid Method (IgM)	719.2 ± 139.8	666.0 ± 65.7	0.089
Advanced Immune Test, B-Type Hepatitis Antigen - HBV-DNA Polymerase (Quantitative)	14.6 ± 5.3	8.5 ± 2.8	<0.001
Advanced Immune Test, B-Type Hepatitis Surface Antigen (Qualitative)	404427.0 ± 33024.8	425295.0 ± 39086.1	0.044
Advanced Immune Test, B-Type Hepatitis Surface Antigen (Qualitative), Nucleic Acid Method	15300.3 ± 1165.0	13743.9 ± 1110.4	<0.001
Advanced Immune Test, B-Type Hepatitis Surface Antigen (Quantitative) - Electrochemiluminescence Immunoassay	1056.0 ± 263.5	1427.9 ± 235.6	<0.001
Advanced Immune Test, B-Type Hepatitis Surface Antigen (Quantitative) - Chemiluminescence Microparticle Immunoassay	857.1 ± 941.0	1141.0 ± 212.2	0.145
Advanced Immune Test, B-Type Hepatitis Surface Antibody	376718.8 ± 31668.8	395484.6 ± 37334.8	0.058
Precise immunological test, B-type Hepatitis Surface Antibody- Nuclear method	13856.0 ± 1049.9	12577.3 ± 991.7	<0.001
Precise immunological test, B-type Hepatitis Surface Antibody IgG	17047.4 ± 1743.2	20629.6 ± 2911.0	<0.001
Precise immunological test, B-type Hepatitis Surface Antibody IgM	4893.1 ± 467.1	4943.7 ± 490.4	0.708
Precise immunological test, B-type Hepatitis Core Antibody-Nuclear method IgG	2847.8 ± 332.9	3044.6 ± 381.3	0.055
Precise immunological test, B-type Hepatitis Core Antibody-Nuclear method IgM	494.8 ± 104.7	443.9 ± 60.5	0.039
Precise immunological test, B-type Hepatitis e Antigen	48602.4 ± 6415.1	50168.0 ± 8904.8	0.473
Precise immunological test, B-type Hepatitis e Antigen- Nuclear method	4295.7 ± 494.4	3516.2 ± 589.3	<0.001
Precise immunological test, B-type Hepatitis e Antigen	46006.0 ± 6172.7	47495.4 ± 8560.6	0.478
Precise immunological test, B-type Hepatitis e Antigen- Nuclear method	4173.1 ± 473.1	3412.3 ± 572.3	<0.001
Precise immunological test, C-type Hepatitis Antibody	279826.2 ± 27244.0	316679.6 ± 33009.0	<0.001
Precise immunological test, C-type Hepatitis Antibody- Nuclear method	3651.5 ± 258.9	2981.2 ± 273.0	<0.001
Precision Immunoassay, Hepatitis D Antibody	117.4 ± 74.1	10.8 ± 4.9	<0.001
Precision Immunoassay, Hepatitis E Antibody IgG	393.7 ± 83.3	596.4 ± 114.3	<0.001
Precision Immunoassay, Hepatitis E Antibody IgM	711.8 ± 149.2	1011.9 ± 186.8	<0.001
Western Blot, Hepatitis C Antibody	117.3 ± 14.6	100.1 ± 13.6	<0.001
Nucleic Acid Amplification, Genotyping Group 1 Hepatitis B Virus	247.1 ± 40.1	177.0 ± 31.9	<0.001
RT-PCR, Hepatitis C Virus	26.2 ± 12.0	14.7 ± 5.4	<0.001
RT-PCR, Hepatitis E Virus	30.2 ± 7.1	63.4 ± 22.9	<0.001
RT-PCR, Hepatitis C Virus	1184.7 ± 121.5	1165.5 ± 143.6	0.608
RT-PCR, Hepatitis C Virus	308.1 ± 91.8	187.2 ± 46.9	<0.001
Hepatitis B Virus [Branched DNA Amplification Signal Detection Method]	953.3 ± 151.4	916.9 ± 165.4	0.416
Nucleic acid amplification, Quantitative Group 1 Hepatitis B Virus [Competition Capture Assay]	99.2 ± 18.8	93.5 ± 15.6	0.245
RT-PCR, Hepatitis B Virus	67595.4 ± 8378.5	70121.8 ± 11659.2	0.377
Hepatitis B Virus [Polymerase Chain Reaction Hybridization Assay]	2321.9 ± 245.1	2070.1 ± 311.8	0.002
Hepatitis C Virus [Branched DNA Amplification Method]	151.0 ± 45.8	113.0 ± 17.7	<0.001
RT-PCR, Hepatitis C Virus	8246.8 ± 694.3	6644.3 ± 776.1	<0.001
Hepatitis C Virus [Reverse Transcription Polymerase Chain Reaction Quantitative Test]	307.9 ± 47.4	218.0 ± 35.5	<0.001
Hepatitis B Virus drug-resistant mutation (lamivudine) [Polymerase Chain Reaction-Restriction Fragment Length Polymorphism]	7.7 ± 3.3	3.8 ± 2.2	<0.001

Characteristic	Pre-covid(18.01-20.02)	Post-covid(20.03-22.03)	p-value*
Hepatitis C Virus [Reverse Transcription Polymerase Chain Reaction Quantitative Test]	307.9 ± 47.4	218.0 ± 35.5	<0.001
Hepatitis B Virus drug-resistant mutation (lamivudine) [Polymerase Chain Reaction-Restriction Fragment Length Polymorphism]	7.7 ± 3.3	3.8 ± 2.2	<0.001
Hepatitis C Virus [Reverse Transcription Polymerase Chain Reaction Hybridization Assay]	793.8 ± 104.6	826.8 ± 100.2	0.257
Hepatitis C Virus [Polymerase Chain Reaction-Restriction Fragment Length Polymorphism of the Junction Fragment]	56.0 ± 15.8	16.3 ± 5.5	<0.001
Nucleic Acid Sequencing, Drug Resistance Group 2_Hepatitis B Virus Drug Resistance-Induced Mutation	344.6 ± 33.8	287.2 ± 34.8	<0.001
Nucleic Acid Sequencing, Drug Resistance Group 2_Hepatitis C Virus, NS5A L31/Y93 Genetic Mutation	23.6 ± 18.4	6.0 ± 2.3	<0.001
Nucleotide sequence analysis, Genotype group 3 of Hepatitis C virus	17.7 ± 8.4	6.7 ± 2.8	<0.001
Nucleotide sequence analysis, Genotype group 3 of Hepatitis C virus	612.6 ± 138.4	284.4 ± 41.9	<0.001
Nucleotide sequence analysis, Genotype group 3 of Hepatitis C virus	78.6 ± 20.2	42.7 ± 11.3	<0.001
Serological immunoassay, HIV antibody	84881.2 ± 6327.1	81384.9 ± 5127.2	0.035
Immunoassay, HIV antibody (precise)	73105.2 ± 5533.0	67297.1 ± 4314.9	<0.001
Immunoassay, HIV antigen/antibody (simultaneous screening)	213140.4 ± 18221.7	241238.3 ± 23311.2	<0.001
Immunoassay, HIV antigen (precise)	898.1 ± 93.3	997.7 ± 177.2	0.017
NAATs, Quantitative group 2 of HIV (RT-PCR)	2792.9 ± 172.0	2908.8 ± 258.0	0.067
NAATs, Drug-resistant group 2 of HIV	145.0 ± 18.1	123.9 ± 21.7	<0.001
RT-PCR, Influenza virus A	2.0 ± 6.2	3.8 ± 2.6	0.202
Influenza A/B virus antigen test	1616.4 ± 1621.0	118.0 ± 57.5	<0.001

* Comparisons made via independent t-test. Abbreviations: ADM, Adrenomedullin; ASO, anti-streptolysin O; AST, antimicrobial susceptibility test; CMV, human cytomegalovirus; CLO, Campylobacter-like organism; CMV, human cytomegalovirus; CRP, C-reactive protein; EBV, Epstein-Barr virus; ESR, erythrocyte sedimentation rate; HBsAg, Hepatitis B virus surface antigen; HCV, hepatitis C virus; HIV, human immunodeficiency virus; HPV, Human Papillomavirus; IgG, immunoglobulin G; IgM, immunoglobulin M; IGRA, interferon gamma release assay; LC-MS/MS: Liquid Chromatography – Mass Spectrometry and Liquid Chromatography – Tandem Mass Spectrometry; NAATs, Nucleic acid amplification tests; OBS, Organic brain syndrome; PCR, polymerase chain reaction; Q-PCR, Quantitative polymerase chain reaction; RE-PCR, Restriction enzyme polymerase chain reaction