

Managementul afecțiunilor hepatice în contextul pandemiei SARS-CoV-2: cum să menținem calitatea îngrijirii pacienților?



FONDUL SOCIAL EUROPEAN

Programul Operațional Capital Uman 2014-2020

Axa prioritară: Incluziunea socială și combaterea sărăciei

Prioritatea de investiții 9.iv: Creșterea accesului la servicii accesibile, durabile și de înaltă calitate, inclusiv asistență medicală și servicii sociale de interes general

Beneficiar: INSTITUTUL CLINIC FUNDENI

Titlul proiectului: „Program de formare a personalului medical din România în managementul pacienților infectați cronic cu virusuri hepatitice B și C - HEPATER”

Contract de finanțare nr. POCU/91/4/8/107931

Cod SMIS: 107931

Lector

Prof. Dr. Liana Gheorghe

UMF *Carol Davila* Bucuresti

Centrul de Gastroenterologie si Hepatologie

Institutul Clinic Fundeni Bucuresti



Obiective

- **Informarea corecta** a medicilor implicati in managementul pacientilor cu afectiuni hepatice cu privire la **impactul pandemiei SARS-CoV-2** asupra acestui grup de pacienti vulnerabili
- **Promovarea recomandarilor societatilor internationale si nationale** (SRGH, RoALD) cu privire la **managementul pacientilor cu afectiuni hepatice in actualul context**
- **Re-configurarea practicii medicale** la nivel global si in Romania acest context

THE LANCET

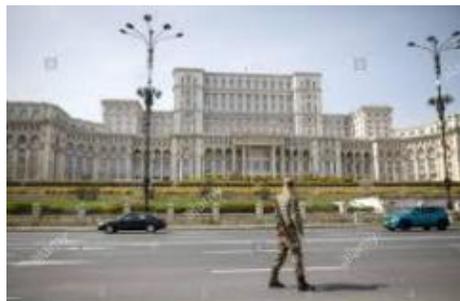
Volume 395, 7th May 2020, Pages 1–108, e108–113, 113–114, 115–116, 117–118, 119–120, 121–122, 123–124, 125–126, 127–128, 129–130, 131–132, 133–134, 135–136, 137–138, 139–140, 141–142, 143–144, 145–146, 147–148, 149–150, 151–152, 153–154, 155–156, 157–158, 159–160, 161–162, 163–164, 165–166, 167–168, 169–170, 171–172, 173–174, 175–176, 177–178, 179–180, 181–182, 183–184, 185–186, 187–188, 189–190, 191–192, 193–194, 195–196, 197–198, 199–200, 201–202, 203–204, 205–206, 207–208, 209–210, 211–212, 213–214, 215–216, 217–218, 219–220, 221–222, 223–224, 225–226, 227–228, 229–230, 231–232, 233–234, 235–236, 237–238, 239–240, 241–242, 243–244, 245–246, 247–248, 249–250, 251–252, 253–254, 255–256, 257–258, 259–260, 261–262, 263–264, 265–266, 267–268, 269–270, 271–272, 273–274, 275–276, 277–278, 279–280, 281–282, 283–284, 285–286, 287–288, 289–290, 291–292, 293–294, 295–296, 297–298, 299–300, 301–302, 303–304, 305–306, 307–308, 309–310, 311–312, 313–314, 315–316, 317–318, 319–320, 321–322, 323–324, 325–326, 327–328, 329–330, 331–332, 333–334, 335–336, 337–338, 339–340, 341–342, 343–344, 345–346, 347–348, 349–350, 351–352, 353–354, 355–356, 357–358, 359–360, 361–362, 363–364, 365–366, 367–368, 369–370, 371–372, 373–374, 375–376, 377–378, 379–380, 381–382, 383–384, 385–386, 387–388, 389–390, 391–392, 393–394, 395–396, 397–398, 399–400, 401–402, 403–404, 405–406, 407–408, 409–410, 411–412, 413–414, 415–416, 417–418, 419–420, 421–422, 423–424, 425–426, 427–428, 429–430, 431–432, 433–434, 435–436, 437–438, 439–440, 441–442, 443–444, 445–446, 447–448, 449–450, 451–452, 453–454, 455–456, 457–458, 459–460, 461–462, 463–464, 465–466, 467–468, 469–470, 471–472, 473–474, 475–476, 477–478, 479–480, 481–482, 483–484, 485–486, 487–488, 489–490, 491–492, 493–494, 495–496, 497–498, 499–500, 501–502, 503–504, 505–506, 507–508, 509–510, 511–512, 513–514, 515–516, 517–518, 519–520, 521–522, 523–524, 525–526, 527–528, 529–530, 531–532, 533–534, 535–536, 537–538, 539–540, 541–542, 543–544, 545–546, 547–548, 549–550, 551–552, 553–554, 555–556, 557–558, 559–560, 561–562, 563–564, 565–566, 567–568, 569–570, 571–572, 573–574, 575–576, 577–578, 579–580, 581–582, 583–584, 585–586, 587–588, 589–590, 591–592, 593–594, 595–596, 597–598, 599–600, 601–602, 603–604, 605–606, 607–608, 609–610, 611–612, 613–614, 615–616, 617–618, 619–620, 621–622, 623–624, 625–626, 627–628, 629–630, 631–632, 633–634, 635–636, 637–638, 639–640, 641–642, 643–644, 645–646, 647–648, 649–650, 651–652, 653–654, 655–656, 657–658, 659–660, 661–662, 663–664, 665–666, 667–668, 669–670, 671–672, 673–674, 675–676, 677–678, 679–680, 681–682, 683–684, 685–686, 687–688, 689–690, 691–692, 693–694, 695–696, 697–698, 699–700, 701–702, 703–704, 705–706, 707–708, 709–710, 711–712, 713–714, 715–716, 717–718, 719–720, 721–722, 723–724, 725–726, 727–728, 729–730, 731–732, 733–734, 735–736, 737–738, 739–740, 741–742, 743–744, 745–746, 747–748, 749–750, 751–752, 753–754, 755–756, 757–758, 759–760, 761–762, 763–764, 765–766, 767–768, 769–770, 771–772, 773–774, 775–776, 777–778, 779–780, 781–782, 783–784, 785–786, 787–788, 789–790, 791–792, 793–794, 795–796, 797–798, 799–800, 801–802, 803–804, 805–806, 807–808, 809–810, 811–812, 813–814, 815–816, 817–818, 819–820, 821–822, 823–824, 825–826, 827–828, 829–830, 831–832, 833–834, 835–836, 837–838, 839–840, 841–842, 843–844, 845–846, 847–848, 849–850, 851–852, 853–854, 855–856, 857–858, 859–860, 861–862, 863–864, 865–866, 867–868, 869–870, 871–872, 873–874, 875–876, 877–878, 879–880, 881–882, 883–884, 885–886, 887–888, 889–890, 891–892, 893–894, 895–896, 897–898, 899–900, 901–902, 903–904, 905–906, 907–908, 909–910, 911–912, 913–914, 915–916, 917–918, 919–920, 921–922, 923–924, 925–926, 927–928, 929–930, 931–932, 933–934, 935–936, 937–938, 939–940, 941–942, 943–944, 945–946, 947–948, 949–950, 951–952, 953–954, 955–956, 957–958, 959–960, 961–962, 963–964, 965–966, 967–968, 969–970, 971–972, 973–974, 975–976, 977–978, 979–980, 981–982, 983–984, 985–986, 987–988, 989–990, 991–992, 993–994, 995–996, 997–998, 999–1000, 1001–1002, 1003–1004, 1005–1006, 1007–1008, 1009–1010, 1011–1012, 1013–1014, 1015–1016, 1017–1018, 1019–1020, 1021–1022, 1023–1024, 1025–1026, 1027–1028, 1029–1030, 1031–1032, 1033–1034, 1035–1036, 1037–1038, 1039–1040, 1041–1042, 1043–1044, 1045–1046, 1047–1048, 1049–1050, 1051–1052, 1053–1054, 1055–1056, 1057–1058, 1059–1060, 1061–1062, 1063–1064, 1065–1066, 1067–1068, 1069–1070, 1071–1072, 1073–1074, 1075–1076, 1077–1078, 1079–1080, 1081–1082, 1083–1084, 1085–1086, 1087–1088, 1089–1090, 1091–1092, 1093–1094, 1095–1096, 1097–1098, 1099–1100, 1101–1102, 1103–1104, 1105–1106, 1107–1108, 1109–1110, 1111–1112, 1113–1114, 1115–1116, 1117–1118, 1119–1120, 1121–1122, 1123–1124, 1125–1126, 1127–1128, 1129–1130, 1131–1132, 1133–1134, 1135–1136, 1137–1138, 1139–1140, 1141–1142, 1143–1144, 1145–1146, 1147–1148, 1149–1150, 1151–1152, 1153–1154, 1155–1156, 1157–1158, 1159–1160, 1161–1162, 1163–1164, 1165–1166, 1167–1168, 1169–1170, 1171–1172, 1173–1174, 1175–1176, 1177–1178, 1179–1180, 1181–1182, 1183–1184, 1185–1186, 1187–1188, 1189–1190, 1191–1192, 1193–1194, 1195–1196, 1197–1198, 1199–1200, 1201–1202, 1203–1204, 1205–1206, 1207–1208, 1209–1210, 1211–1212, 1213–1214, 1215–1216, 1217–1218, 1219–1220, 1221–1222, 1223–1224, 1225–1226, 1227–1228, 1229–1230, 1231–1232, 1233–1234, 1235–1236, 1237–1238, 1239–1240, 1241–1242, 1243–1244, 1245–1246, 1247–1248, 1249–1250, 1251–1252, 1253–1254, 1255–1256, 1257–1258, 1259–1260, 1261–1262, 1263–1264, 1265–1266, 1267–1268, 1269–1270, 1271–1272, 1273–1274, 1275–1276, 1277–1278, 1279–1280, 1281–1282, 1283–1284, 1285–1286, 1287–1288, 1289–1290, 1291–1292, 1293–1294, 1295–1296, 1297–1298, 1299–1300, 1301–1302, 1303–1304, 1305–1306, 1307–1308, 1309–1310, 1311–1312, 1313–1314, 1315–1316, 1317–1318, 1319–1320, 1321–1322, 1323–1324, 1325–1326, 1327–1328, 1329–1330, 1331–1332, 1333–1334, 1335–1336, 1337–1338, 1339–1340, 1341–1342, 1343–1344, 1345–1346, 1347–1348, 1349–1350, 1351–1352, 1353–1354, 1355–1356, 1357–1358, 1359–1360, 1361–1362, 1363–1364, 1365–1366, 1367–1368, 1369–1370, 1371–1372, 1373–1374, 1375–1376, 1377–1378, 1379–1380, 1381–1382, 1383–1384, 1385–1386, 1387–1388, 1389–1390, 1391–1392, 1393–1394, 1395–1396, 1397–1398, 1399–1400, 1401–1402, 1403–1404, 1405–1406, 1407–1408, 1409–1410, 1411–1412, 1413–1414, 1415–1416, 1417–1418, 1419–1420, 1421–1422, 1423–1424, 1425–1426, 1427–1428, 1429–1430, 1431–1432, 1433–1434, 1435–1436, 1437–1438, 1439–1440, 1441–1442, 1443–1444, 1445–1446, 1447–1448, 1449–1450, 1451–1452, 1453–1454, 1455–1456, 1457–1458, 1459–1460, 1461–1462, 1463–1464, 1465–1466, 1467–1468, 1469–1470, 1471–1472, 1473–1474, 1475–1476, 1477–1478, 1479–1480, 1481–1482, 1483–1484, 1485–1486, 1487–1488, 1489–1490, 1491–1492, 1493–1494, 1495–1496, 1497–1498, 1499–1500, 1501–1502, 1503–1504, 1505–1506, 1507–1508, 1509–1510, 1511–1512, 1513–1514, 1515–1516, 1517–1518, 1519–1520, 1521–1522, 1523–1524, 1525–1526, 1527–1528, 1529–1530, 1531–1532, 1533–1534, 1535–1536, 1537–1538, 1539–1540, 1541–1542, 1543–1544, 1545–1546, 1547–1548, 1549–1550, 1551–1552, 1553–1554, 1555–1556, 1557–1558, 1559–1560, 1561–1562, 1563–1564, 1565–1566, 1567–1568, 1569–1570, 1571–1572, 1573–1574, 1575–1576, 1577–1578, 1579–1580, 1581–1582, 1583–1584, 1585–1586, 1587–1588, 1589–1590, 1591–1592, 1593–1594, 1595–1596, 1597–1598, 1599–1600, 1601–1602, 1603–1604, 1605–1606, 1607–1608, 1609–1610, 1611–1612, 1613–1614, 1615–1616, 1617–1618, 1619–1620, 1621–1622, 1623–1624, 1625–1626, 1627–1628, 1629–1630, 1631–1632, 1633–1634, 1635–1636, 1637–1638, 1639–1640, 1641–1642, 1643–1644, 1645–1646, 1647–1648, 1649–1650, 1651–1652, 1653–1654, 1655–1656, 1657–1658, 1659–1660, 1661–1662, 1663–1664, 1665–1666, 1667–1668, 1669–1670, 1671–1672, 1673–1674, 1675–1676, 1677–1678, 1679–1680, 1681–1682, 1683–1684, 1685–1686, 1687–1688, 1689–1690, 1691–1692, 1693–1694, 1695–1696, 1697–1698, 1699–1700, 1701–1702, 1703–1704, 1705–1706, 1707–1708, 1709–1710, 1711–1712, 1713–1714, 1715–1716, 1717–1718, 1719–1720, 1721–1722, 1723–1724, 1725–1726, 1727–1728, 1729–1730, 1731–1732, 1733–1734, 1735–1736, 1737–1738, 1739–1740, 1741–1742, 1743–1744, 1745–1746, 1747–1748, 1749–1750, 1751–1752, 1753–1754, 1755–1756, 1757–1758, 1759–1760, 1761–1762, 1763–1764, 1765–1766, 1767–1768, 1769–1770, 1771–1772, 1773–1774, 1775–1776, 1777–1778, 1779–1780, 1781–1782, 1783–1784, 1785–1786, 1787–1788, 1789–1790, 1791–1792, 1793–1794, 1795–1796, 1797–1798, 1799–1800, 1801–1802, 1803–1804, 1805–1806, 1807–1808, 1809–1810, 1811–1812, 1813–1814, 1815–1816, 1817–1818, 1819–1820, 1821–1822, 1823–1824, 1825–1826, 1827–1828, 1829–1830, 1831–1832, 1833–1834, 1835–1836, 1837–1838, 1839–1840, 1841–1842, 1843–1844, 1845–1846, 1847–1848, 1849–1850, 1851–1852, 1853–1854, 1855–1856, 1857–1858, 1859–1860, 1861–1862, 1863–1864, 1865–1866, 1867–1868, 1869–1870, 1871–1872, 1873–1874, 1875–1876, 1877–1878, 1879–1880, 1881–1882, 1883–1884, 1885–1886, 1887–1888, 1889–1890, 1891–1892, 1893–1894, 1895–1896, 1897–1898, 1899–1900, 1901–1902, 1903–1904, 1905–1906, 1907–1908, 1909–1910, 1911–1912, 1913–1914, 1915–1916, 1917–1918, 1919–1920, 1921–1922, 1923–1924, 1925–1926, 1927–1928, 1929–1930, 1931–1932, 1933–1934, 1935–1936, 1937–1938, 1939–1940, 1941–1942, 1943–1944, 1945–1946, 1947–1948, 1949–1950, 1951–1952, 1953–1954, 1955–1956, 1957–1958, 1959–1960, 1961–1962, 1963–1964, 1965–1966, 1967–1968, 1969–1970, 1971–1972, 1973–1974, 1975–1976, 1977–1978, 1979–1980, 1981–1982, 1983–1984, 1985–1986, 1987–1988, 1989–1990, 1991–1992, 1993–1994, 1995–1996, 1997–1998, 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, 2013–2014, 2015–2016, 2017–2018, 2019–2020, 2021–2022, 2023–2024, 2025–2026, 2027–2028, 2029–2030, 2031–2032, 2033–2034, 2035–2036, 2037–2038, 2039–2040, 2041–2042, 2043–2044, 2045–2046, 2047–2048, 2049–2050, 2051–2052, 2053–2054, 2055–2056, 2057–2058, 2059–2060, 2061–2062, 2063–2064, 2065–2066, 2067–2068, 2069–2070, 2071–2072, 2073–2074, 2075–2076, 2077–2078, 2079–2080, 2081–2082, 2083–2084, 2085–2086, 2087–2088, 2089–2090, 2091–2092, 2093–2094, 2095–2096, 2097–2098, 2099–2100, 2101–2102, 2103–2104, 2105–2106, 2107–2108, 2109–2110, 2111–2112, 2113–2114, 2115–2116, 2117–2118, 2119–2120, 2121–2122, 2123–2124, 2125–2126, 2127–2128, 2129–2130, 2131–2132, 2133–2134, 2135–2136, 2137–2138, 2139–2140, 2141–2142, 2143–2144, 2145–2146, 2147–2148, 2149–2150, 2151–2152, 2153–2154, 2155–2156, 2157–2158, 2159–2160, 2161–2162, 2163–2164, 2165–2166, 2167–2168, 2169–2170, 2171–2172, 2173–2174, 2175–2176, 2177–2178, 2179–2180, 2181–2182, 2183–2184, 2185–2186, 2187–2188, 2189–2190, 2191–2192, 2193–2194, 2195–2196, 2197–2198, 2199–2200, 2201–2202, 2203–2204, 2205–2206, 2207–2208, 2209–2210, 2211–2212, 2213–2214, 2215–2216, 2217–2218, 2219–2220, 2221–2222, 2223–2224, 2225–2226, 2227–2228, 2229–2230, 2231–2232, 2233–2234, 2235–2236, 2237–2238, 2239–2240, 2241–2242, 2243–2244, 2245–2246, 2247–2248, 2249–2250, 2251–2252, 2253–2254, 2255–2256, 2257–2258, 2259–2260, 2261–2262, 2263–2264, 2265–2266, 2267–2268, 2269–2270, 2271–2272, 2273–2274, 2275–2276, 2277–2278, 2279–2280, 2281–2282, 2283–2284, 2285–2286, 2287–2288, 2289–2290, 2291–2292, 2293–2294, 2295–2296, 2297–2298, 2299–2300, 2301–2302, 2303–2304, 2305–2306, 2307–2308, 2309–2310, 2311–2312, 2313–2314, 2315–2316, 2317–2318, 2319–2320, 2321–2322, 2323–2324, 2325–2326, 2327–2328, 2329–2330, 2331–2332, 2333–2334, 2335–2336, 2337–2338, 2339–2340, 2341–2342, 2343–2344, 2345–2346, 2347–2348, 2349–2350, 2351–2352, 2353–2354, 2355–2356, 2357–2358, 2359–2360, 2361–2362, 2363–2364, 2365–2366, 2367–2368, 2369–2370, 2371–2372, 2373–2374, 2375–2376, 2377–2378, 2379–2380, 2381–2382, 2383–2384, 2385–2386, 2387–2388, 2389–2390, 2391–2392, 2393–2394, 2395–2396, 2397–2398, 2399–2400, 2401–2402, 2403–2404, 2405–2406, 2407–2408, 2409–2410, 2411–2412, 2413–2414, 2415–2416, 2417–2418, 2419–2420, 2421–2422, 2423–2424, 2425–2426, 2427–2428, 2429–2430, 2431–2432, 2433–2434, 2435–2436, 2437–2438, 2439–2440, 2441–2442, 2443–2444, 2445–2446, 2447–2448, 2449–2450, 2451–2452, 2453–2454, 2455–2456, 2457–2458, 2459–2460, 2461–2462, 2463–2464, 2465–2466, 2467–2468, 2469–2470, 2471–2472, 2473–2474, 2475–2476, 2477–2478, 2479–2480, 2481–2482, 2483–2484, 2485–2486, 2487–2488, 2489–2490, 2491–2492, 2493–2494, 2495–2496, 2497–2498, 2499–2500, 2501–2502, 2503–2504, 2505–2506,



Origini & epidemiologie

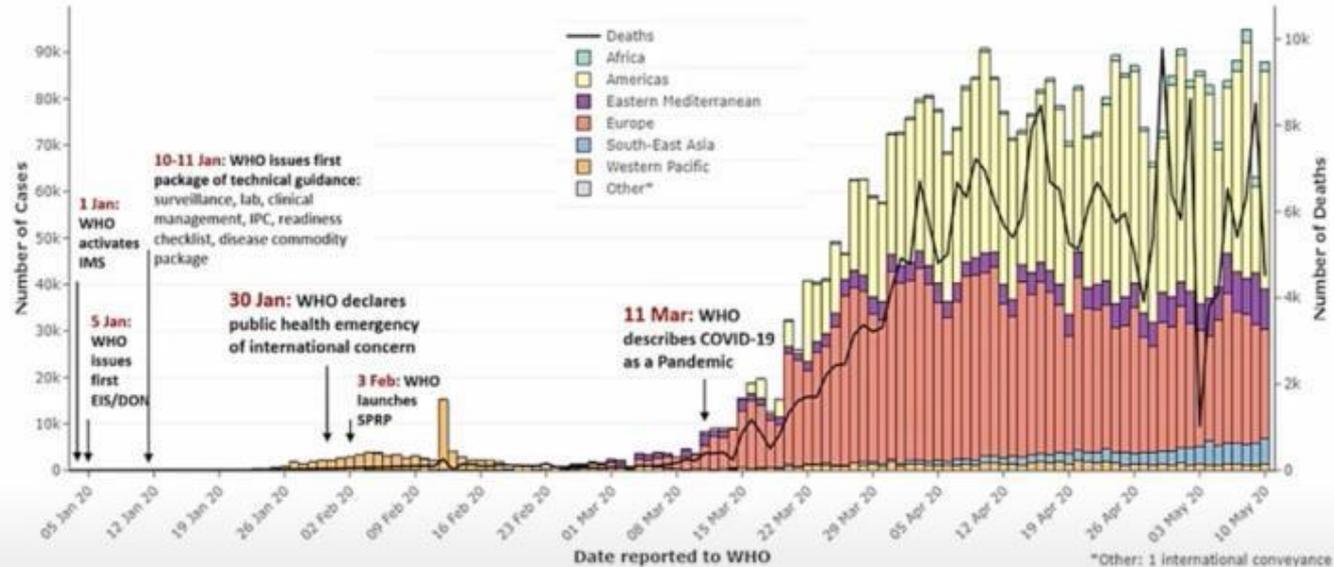
- **Decembrie 2019:** in orasul Wuhan, provincia Hubei, China apar primele cazuri de infectii acute respiratorii/pneumonii severe cu un agent patogen necunoscut
- **Ianuarie 2020:** identificarea 2019-nCov → **SARS-CoV-2** (**S**evere **A**cute **R**espiratory **S**yndrome **C**oronavirus **2**) (OMS/International Committee on Taxonomy of Viruses)
- **11 Februarie 2020:** **COVID-19** (Coronavirus disease 2019) - o afectiune respiratorie virala cu risc vital, cauzata de noul coronavirus (SARS-CoV-2)
- **11 martie 2020:** OMS declara infectia SARS-CoV-2 PANDEMIE
 - **11 martie:** 121,500 de cazuri, 4373 de decese raspandite in 118 tari (Johns Hopkins University data)
 - **1 aprilie:** >1 milion de cazuri de COVID-19 & >46,000 de decese raportate la nivel mondial
 - **11 mai:** 4,215,274 cazuri; 284,672 de decese (6.8%) si 1,506,231 vindecari (35.7%)
- Masuri fara precedent de distantare sociala, carantina, lockdown
- O criza de sanatate publica, sociala, economica globala





Evolutia pandemiei SARS-CoV-2: date esentiale din ultimele 5 luni

Timeline of key events - Recapping the last 5 months



COVID-19

MAY 11, 2020

COVID-19: Daily dashboard

Global case count (as of May 11, 13:45 GMT): 4,215,274 infections; 284,672 deaths (6.8%); 1,506,231 recovered (35.7%).

The following are the 25 countries with the highest case counts as of May 11, 13:45 GMT.

Country	Infected	Deaths	Recovered	Infected per million	Deaths per million
USA	1,369,025	80,800	256,336	4,136	244
Spain	268,143	26,744	177,846	5,735	572
UK	223,060	32,065	0 ^	3,286	472
Russia	221,344	2,009	39,801	1,517	14
Italy	219,070	30,560	105,186	3,623	505
France	176,970	26,380	56,217	2,711	404
Germany	171,999	7,569	145,600	2,053	90
Brazil	163,510	11,207	64,957	769	53
Turkey	138,657	3,786	92,691	1,644	45
Iran	109,286	6,685	87,422	1,301	80
China	82,918	4,633	78,144	58	3
Canada	68,848	4,870	32,096	1,824	129
India	67,724	2,215	21,155	49	2
Peru	67,307	1,889	21,349	2,041	57

MAY 26, 2020

COVID-19: Daily dashboard

Global case count (as of May 26, 08:33 ET): 5,518,905 confirmed cases; 346,700 deaths (6.3%); 2,253,651 recovered (40.8%).

The following are the 25 countries with the highest case counts as of May 26, 08:33 ET.

Country	Total confirmed cases	Total deaths	Total recovered	Confirmed cases per million population	Deaths per million population
US	1,662,768	98,223	379,157	5,082	300
Brazil	374,898	23,473	153,833	1,790	112
Russia	362,342	3,807	131,129	2,389	25
United Kingdom	262,547	36,996	1,161	3,949	556
Spain	235,400	26,834	150,376	5,038	574
Italy	230,158	32,877	141,981	3,808	544
France	183,067	28,460	65,317	2,733	425
Germany	180,802	8,323	161,599	2,177	100
Turkey	157,814	4,369	120,015	1,918	53
India	146,376	4,187	61,151	108	3
Iran	139,511	7,508	109,437	1,693	91
Peru	123,979	3,629	50,949	3,874	113
Canada	87,122	6,655	44,651	2,351	180
China	84,102	4,638	79,353	60	3
Saudi Arabia	74,795	399	45,668	2,212	12
Chile	73,997	761	29,302	3,948	41
Mexico	71,105	7,633	49,452	564	60
Pakistan	57,705	1,197	18,314	265	6
Belgium	57,455	9,334	15,320	5,019	815
Qatar	47,207	28	11,844	15,679	9
Netherlands	45,647	5,849	174	2,649	339
Belarus	38,059	208	15,086	3,934	22
Ecuador	37,355	3,203	18,003	2,187	188
Bangladesh	36,751	522	7,579	218	3
Sweden	33,843	4,029	4,971	3,324	396

Reference: <https://coronavirus.jhu.edu/map.html>

SOURCE: Johns Hopkins University CSSE



COVID-19

JUNE 5, 2020

COVID-19: Daily dashboard

Global case count (as of June 5, 09:33 ET): **6,672,287** confirmed cases;
391,773 deaths (5.9%); **2,894,476** recovered (43.4%).

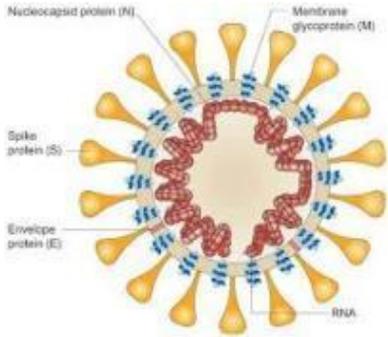
The following are the 25 countries with the highest case counts as of June 5, 09:33 ET.

09:33 ET.

Country	Total confirmed cases	Total deaths	Total recovered	Confirmed cases per million population	Deaths per million population
US	1,874,411	108,238	485,002	5,729	331
Brazil	614,941	34,021	254,963	2,935	162
Russia	449,256	5,520	212,237	3,028	37
United Kingdom	283,080	39,987	1,219	4,257	601
Spain	240,660	27,133	150,376	5,151	581
Italy	234,013	33,689	161,895	3,873	558
India	229,594	6,381	109,866	169	5
France	189,569	29,068	70,094	2,830	434
Germany	184,924	8,645	168,445	2,227	104
Peru	183,198	5,031	76,228	5,728	157
Turkey	167,410	4,630	131,778	2,032	56
Iran	167,156	8,134	129,741	2,028	99
Chile	118,292	1,356	21,305	6,316	72
Mexico	105,680	12,545	74,758	837	99
Saudi Arabia	95,748	642	70,616	2,699	18
Canada	95,269	7,717	52,184	2,570	208
Pakistan	89,249	1,838	31,198	403	8
China	84,174	4,638	79,420	60	3
Qatar	65,495	49	40,935	21,653	16
Bangladesh	60,391	811	12,804	357	5
Belgium	58,907	9,566	16,112	5,147	836
Netherlands	47,358	6,024	181	2,741	349
Belarus	46,868	259	22,066	4,832	27
Sweden	41,883	4,562	NA	4,113	448
Ecuador	40,966	3,486	20,019	2,397	204

Reference: <https://coronavirus.jhu.edu/map.html>

SOURCE: Johns Hopkins University CSSE



Ce trebuie sa stim despre SARS-CoV-2 ?

- Familia coronavirusurilor cuprinde 4 virusuri asociate cu gripa comuna (229E, NL63, OC43, HKU1) si **3 coronavirusuri asociate cu pneumonia** (SARS-CoV, MERS-CoV & SARS-CoV-2)
- **SARS-CoV-2 este un ARN virus, hipercontagios si hipermutabil**, similar coronavirusurilor cunoscute, de origine animala, ce pot infecta populatia umana
- Simptomele respiratorii sunt similare celor intalnite in epidemiile anterioare cu coronavirus:
 - Severe Acute Respiratory Syndrome (SARS-CoV) from 2002/3
 - Middle Eastern Respiratory Syndrome (MERS-CoV) 2009
- SARS-CoV-2 se caracterizeaza printr-o contagiozitate (transmitere de la o persoana la alta) foarte mare, **fiecare persoana infectata infectand in medie alte 2-4 persoane**, ceea ce a determinat evolutia pandemica a infectiei si a generat una dintre cele mai semnificative crize de sanatate din istoria moderna
- **Perioada de incubatie** (intervalul de la contractarea bolii pana la simptome) poate varia intre 1 si 14 zile, **in medie 3-7 zile**

Modalitati de transmitere SARS-CoV-2

- **SARS-CoV-2 se transmite prin picaturi respiratorii/aerene si, posibil, pe cale aeriana, prin inhalare de aerosoli**
- Tipic, **transmiterea se face prin contact apropiat (≤ 1 m) neprotejat cu o persoana infectata** care tuseste sau stranuta, iar **picaturile respiratorii** vin in contact cu mucoasa bucala, nazala, conjunctivala (gura, nas, ochi) si prin contact direct sau indirect (prin intermediul tegumentelor – maini etc. contaminate)
- Aditonal, transmiterea poate avea loc si **prin intermediul unor suprafete contaminate cu picaturi respiratorii**
- **Transmiterea pe cale aeriana prin aerosoli** apare prin virionii continuti in aceste picaturi mici (in general, particule $< 5\mu\text{m}$ diametru) ce pot ramane in aer pentru mult timp si se pot transmite pe distante de > 1 m); acesta nu e un mod obisnuit de transmitere comunitara, dar poate fi intalnit **in conditii specifice – manevre ce genereaza aerosoli ca aspiratia nasofaringiana, intubatia endotraheala, procedurile endoscopice**
- S-a postulat si **posibilitatea transmiterii fecale** (virioni SARS-CoV-2 au fost detectati in fecale) – cantitatea mica si viabilitatea incerta sugereaza ca acestea nu sunt infectioase

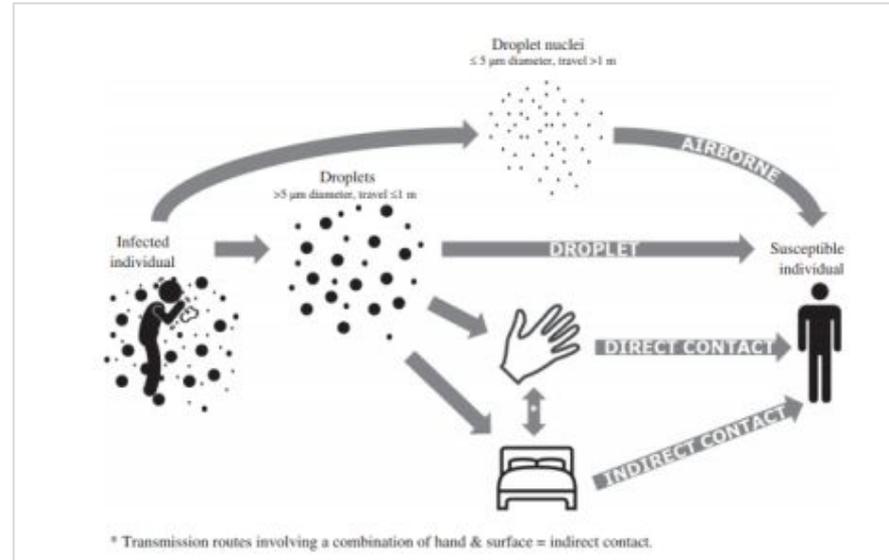
Xu Y. Trends Microbiol. 2020;28(4):239-240. doi:10.1016/j.tim.2020.02.001
van Doremalen N, et al. N Engl J Med. 2020;0(0):null. doi:10.1056/NEJMc2004973

Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>. Accessed April 23, 2020.

Modalitati generale de prevenire a transmiterii SARS-CoV-2

In consecinta, aceste cai trebuie protejate de infectie prin:

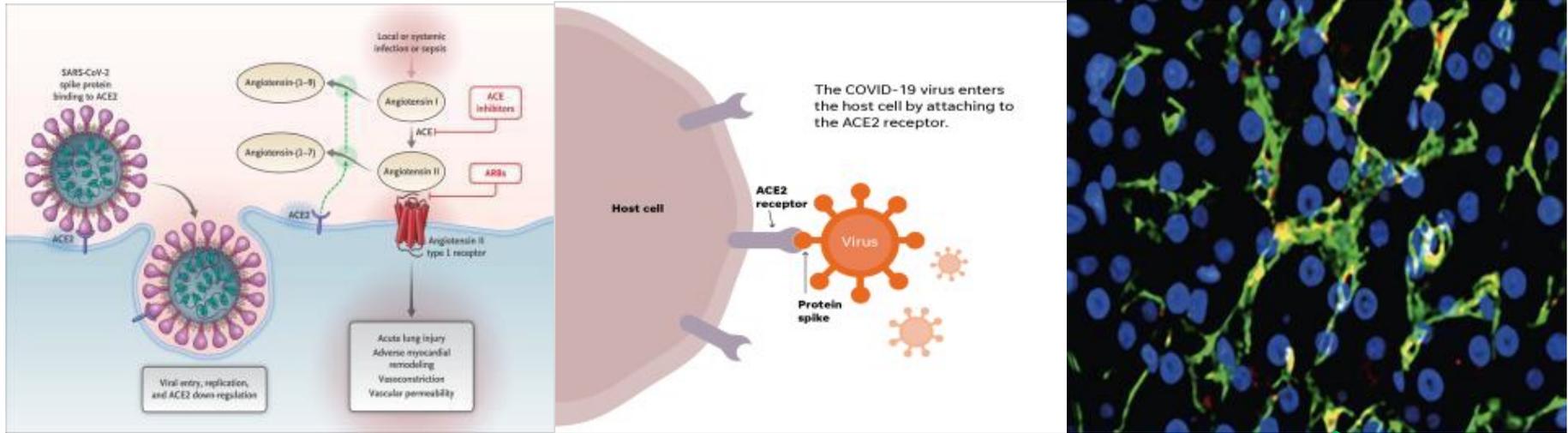
- **Masca chirurgicala** care sa ne acopere nasul si gura (a carei suprafata externa nu o atingem si o aruncam dupa utilizare cu fata externa pliata in interior)
- Tuse/stranut in plica cotului/servetel pe care il aruncam
- **Spalatul pe maini** cu apa si sapun timp de 30-40 secunde sau purtarea de manusi (atentie la manusi, ele nu protejeaza decat mainile, nu va atingeti fata, ochii, nasul sau gura cu manusile!), si ochelari sau vizeta protectoare
- **Dezinfectarea frecventa a suprafetelor** cu solutii biocide, viroicide, alcool/clor



Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>.

Accessed April 23, 2020.

Patogeneza: intrarea SARS-CoV-2 in celula



- SARS-CoV-2 intra in celula via *angiotensin-converting enzyme 2 (ACE2) receptor – expresia hepatica*
- *Proteina spike* a virusului e activata de precursorul serinei 2 transmembranare care faciliteaza fuziunea virus-celula
- Receptorul ACE2 este exprimat la nivelul a diferite tipuri de celule, in mod particular in intestin, plaman, limba, stomac, pancreas, ficat (colangiocite, hepatocite) – SARS-CoV-2 poate infecta direct celulele hepatice (hepatocite, colangiocite)

Care sunt simptomele de alarma ale COVID-19?

- COVID-19 se manifesta printr-o constelatie de simptome ce variaza in severitate de la cazuri asimptomatice pana la forme severe de insuficienta respiratorie acuta
- Cele mai frecvente sunt **simptomele respiratorii**: tuse, dispnee (dificultate la respiratie: senzatia ca „nu le ajunge aerul”, scurtarea respiratiei, sete de aer), durere/junghi toracic, durere in gat
- **Simptomele generale** ca **febra** (foarte frecvent si, de regula, peste 38°C), **frisoane, astenie** (oboseala) marcata, **adinamie** (oboseala extrema asociata cu dificultatea de a face eforturi minime ca mersul la baie, activitati de autoingrijire - spalare, pieptanat etc. sau ridicarea din pat), **mialgii** (dureri musculare), **cefalee** (dureri de cap)
- La debut si in formele usoare, numerosi pacienti (pana la 40-50%) se plang de **pierderea mirosului (anosmie) si gustului (ageuzie) (“test virtual”)** – simptome la care e bine sa fim atenti si care trebuie sa ne alerteze, fiind caracteristice stadiilor precoce ale bolii



Huang C, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet 2020;395:497-506

Sultan S, et al. Am J Gastroenterol 2020; in press
Pan L, et al. Am J Gastroenterol. 2020

Poate COVID-19 sa se prezinte ca o afectiune digestiva?

- Simptomele GI/teste hepatice alterate pot fi intalnite in 30% pana la 50% dintre pacienti - expresia inocularii tractului GI/ficatului de catre virusul inghitit si prezentei ACE2 receptorilor la nivelul celulei intestinale/celulelor hepatice
- 20-25% dintre pacienti prezinta diaree, durere abdominala, greata, varsaturi
- Aceste simptome se pot suprapune peste afectiuni cronice gastrointestinale, complicand tabloul, ducand la confuzie si intarziere in diagnostic
- Simptomele digestive in COVID-19 sunt nespecifice si nu imbraca un aspect particular la pacientii cu IBD, dar se asociaza, de regula, cu simptome respiratorii, febra, astenie marcata sau pierderea gustului sau mirosului, aceasta asociere fiind de natura sa ne alerteze
- Numai o minoritate de pacienti (aproximativ 7%) poate prezenta exclusiv simptome digestive
- Simptomele digestive se agraveaza in paralel cu severitatea COVID-19
- Relatia dintre manifestarile GI nespecifice si infectia SARS-COV-2 trebuie intotdeauna evaluata si completata prin ancheta epidemiologica (contactul neprotejat in ultimele 14 zile cu persoane confirmate SARS-COV-2 pozitiv, persoane care au calatorit recent in zone “rosii”, persoane in carantina, focare familiale, etc.).

AGA resources for COVID-19

Up-to-date news, resources and research to help the GI community navigate the coronavirus pandemic.

AGA Institute Rapid Review of the GI and Liver Manifestations of COVID-19, Meta-Analysis of International Data, and Recommendations for the Consultative Management of Patients with COVID-19

Authors: Shahnaz Sultan^{*1}, Osama Altayar^{*2}, Shazia M. Siddique³, Perica Davitkov⁴, Joseph D. Feuerstein⁵, Joseph K. Lim⁶, Yngve Falck-Ytter⁴, Hashem B. El-Serag⁷ on behalf of the AGA

*co-first authors

Affiliations:

1. Division of Gastroenterology, Hepatology, and Nutrition, University of Minnesota, Minneapolis VA Healthcare System, Minneapolis, Minnesota
2. Division of Gastroenterology, Washington University School of Medicine, St. Louis, Missouri
3. Division of Gastroenterology, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania
4. Division of Gastroenterology, Northeast Ohio Veterans Affairs Healthcare System, Case Western Reserve University School of Medicine, Cleveland, Ohio
5. Division of Gastroenterology and Center for Inflammatory Bowel Diseases, Beth Israel Deaconess Medical Center, Boston, Massachusetts
6. Yale Liver Center and Section of Digestive Diseases, Yale University School of Medicine, New Haven, Connecticut
7. Department of Medicine, Baylor College of Medicine, Houston, Texas

Address for Correspondence:

American Gastroenterological Association
National Office, 4930 Del Ray Avenue
Bethesda, Maryland 20814
E-mail: ewilson@gastro.org
Telephone: (301) 941-2618

Keywords: COVID-19, gastrointestinal and liver manifestations

This document represents the official recommendations of the American Gastroenterological Association (AGA) and was developed by the AGA Clinical Guideline Committee and Clinical Practice Update Committee and approved by the AGA Governing Board. Development of this guideline was fully funded by the AGA Institute with no additional outside funding.

AGA Rapid Review: meta-analiza datelor internationale

- Meta-analiza a 47 studii incluzand 10,890 pacienti
- Prevalenta simptomelor GI a fost 7.7% (95% CI 7.2-8.2) pentru diaree, 7.8% (95% CI 7.1-8.5) pentru greata/varsaturi, 3.6% (95% CI 2.0- 3.4) pentru durerea abdominala si 15% pentru anomaliiile ALT, AST
- Analizand comparativ datele din China vs. Europa/SUA, se remarca diferente semnificative in prezenta manifestarilor GI

GI and Liver Symptoms	All Studies % (95% CI)	Studies from China % (95% CI)	Studies from countries other than China % (95% CI)
Diarrhea in all Patients*	7.7% (7.2 to 8.2) N/n = 43/10,676	5.8% (5.3 to 6.4) N/n = 32/8,612	18.3% (16.6 to 20.1) N/n = 11/2,064
Nausea/Vomiting in all Patients*	7.8% (7.1 to 8.5) N/n = 26/5,955	5.2% (4.4 to 5.9) N/n = 19/4,054	14.9% (13.3 -16.6) N/n = 7/1,901
Abdominal Pain*	3.6% (3.0 to 4.3) N/n = 15/4,031	2.7% (2.0 to 3.4) N/n = 10/2,447	5.3% (4.2 to 6.6) N/n = 5/1,584
Patients with Elevated AST	15.0% (13.6 to 16.5) N/n = 16/2,514	14.9% (13.5 to 16.4) N/n = 14/2,398	20.0% (12.8 to 28.1) N/n = 2/116
Patients with Elevated ALT	15.0% (13.6 to 16.4) N/n = 17/2,711	14.9% (13.5 to 16.3) N/n = 15/2,595	19.0% (12.0 to 27.1) N/n = 2/116
Patients with Elevated T. Bilirubin	16.7% (15.0 to 18.5) N/n = 10/1841	16.7% (15.0 to 18.5) N/n = 10/1841	-

Cum diagnosticam infectia SARS-CoV-2 ?

- Standardul pentru dg infectiei actuale : detectia ARN SARS-COV-2 in exudatul nazo-faringian prin tehnici moleculare tip PCR
- Testele serologice sunt fundamentate pe detectia anticorpilor anti-SARS-COV-2 de tip IgM initial si IgG ulterior
- Sensibilitatea lor pentru diagnostic creste progresiv dupa 8-14 zile, iar combinarea lor are sensibilitate de 100% de diagnostic dupa 14-40 de zile
- Probleme: exista numeroase teste serologice cu S si Sf incerta care trebuie validate in studii
- Utilizarea testelor serologice nu este recomandata pentru detectia infectiei actuale** (la camera de garda, in *point of care*, pentru diagnostic sau excluderea acestuia etc.) deoarece interpretarea testului pozitiv sau negativ este confuziva
- Ele vor utile pe scara larga pentru a identifica subiectii care au facut boala si au dobandit, probabil, imunitate



Day after onset	N	RNA		Total antibodies		IgM		IgG		RNA + antibodies	
		n (+)	Se	n (+)	Se	n (+)	Se	n (+)	Se	n (+)	Se
Total	173	112	67.1	161	93.1	143	82.7	112	64.7	172	99.4
1-7	94	58	66.7	36	38.3	27	28.7	18	19.1	74	78.7
8-14	135	67	54.0	121	89.6	99	73.3	73	54.1	131	97.0
15-39	90	25	45.5	90	100	83	94.3	71	79.8	90	100

Zhao et al., Clin Infect Dis 2020: epub ahead of print

Diagnostics Consortium for COVID-19



- **Three molecular technologies have US FDA emergency use authorization (Abbott m2000, Cepheid Xpert, Roche Cobas 6800/8800)**
 - WHO **does not currently recommend the use of antigen-detecting rapid diagnostic tests for patient care**, although research into their performance and potential diagnostic utility is highly encouraged
 - WHO **does not recommend the use of antibody-detecting rapid diagnostic tests for patient care**, but encourages continuation of work to establish their usefulness in disease surveillance and epidemiologic research

- **A Diagnostics Consortium for COVID-19** has been developed that includes WHO, Unicef, Global Fund, World Bank, Unitaid, Gates Foundation, FIND, and CHAI
 - Gathering information and data on tests in development
 - Working with suppliers to negotiate access to tests as well as lower prices
 - Developing an equitable allocation plan for distribution to LMICs

Advice on the use of point-of-care immunodiagnostic tests
for COVID-19

Scientific brief
8 April 2020



Care sunt categoriile de pacienti vulnerabile la infectia SARS-CoV-2 ?

- SARS-COV-2 afecteaza **toate grupele de varsta** (de la copii la varstnici), **mai mult barbatii decat femeile**
- Chiar daca riscul de a face infectia este similar, observatiile din practica (China, Italia, Spania) demonstreaza ca **subiectii peste 60 de ani au riscul cel mai mare de a dezvolta forme severe**
- Alte categorii cu risc crescut sunt reprezentate de **pacientii cu co-morbiditati** : DZ, HTA, afectiuni cardio- si cerebro-vasculare, pacientii institutionalizati sau aflati in ingrijire de lunga durata la domiciliu, pacientii cu afectiuni cronice respiratorii, renale si hepatice, precum si subiectii obezi
- Pacientii cu **boli hepatice avansate (ciroza hepatica decompensata) si receptorii de grefe hepatice** reprezinta **categorii vulnerabile**, cu un risc crescut de infectie SARS-CoV-2 sau/si o evolutie severa a COVID-19, pe de o parte sau/si un risc crescut de decompensare si ACLF, pe de alta parte



Care sunt implicatiile COVID-19 pentru pacientii cu afectiuni hepatice?

Bolile hepatice si COVID-19: consideratii generale si recomandările comune ale societăților științifice



Care of patients with liver disease during the COVID-19 pandemic: EASL-ESCMID position paper



Tobias Boettler,¹ Philip N. Newsome,^{2,3} Mario U. Mondelli,⁴ Mojca Maticic,^{5,6} Elisa Cordero,⁷ Markus Cornberg,^{8,9} Thomas Berg^{10,*}

CLINICAL INSIGHTS FOR HEPATOLOGY AND LIVER TRANSPLANT PROVIDERS
DURING THE COVID-19 PANDEMIC

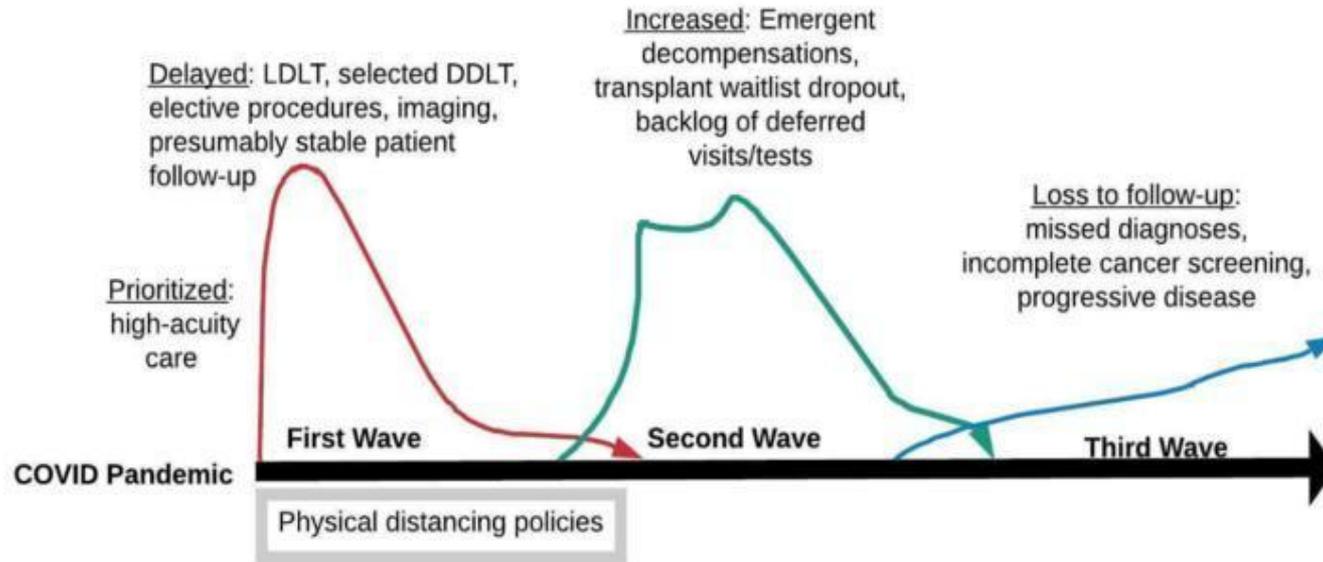


Impactul pandemiei COVID-19 asupra calitatii asistentei medicale in hepatologie: efecte pe termen lung

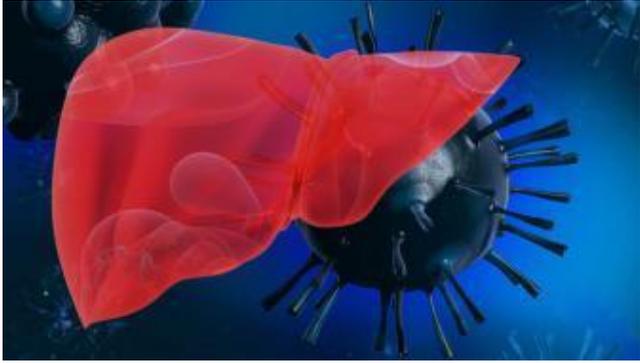


COVID-19 pandemic will have a long-lasting impact on the quality of cirrhosis care

Elliot B. Tapper, Sumeet K. Asrani



Tapper EB, Asrani SK, COVID-19 pandemic will have a long-lasting impact on the quality of cirrhosis care, Journal of Hepatology (2020), doi: <https://doi.org/10.1016/j.jhep.2020.04.005>.



1. Efectul SARS-CoV-2 la nivel hepatic si testele functionale hepatice in COVID-19

Ce stim pana acum ?

- **Cresterea enzimelor hepatice** (ALT, AST, rareori bilirubina sau enzimele de colestaza) este intalnita cu o incidenta ce variaza intre **15 si 53%**, mai mare in populatia din afara Chinei, in formele severe si la pacientii spitalizati; este tranzitorie si nu necesita tratament specific
- Reflecta **efectul citopatic** al SARS-CoV-2 care se leaga de ACE2R abundent reprezentat la nivelul celulelor hepatice/**injuria imunologica** („bystander hepatitis”) – **fara compromiterea functiei hepatice**
- Nu s-a descris o susceptibilitate crescuta sau forme mai severe in cazul pacientilor cu hepatita B sau C sau agravarea colestazei la pacientii cu boli colestatice cronice
- **Hipo-albuminemia si trombocitopenia** sunt intalnite in formele severe spitalizate
- **Categorii vulnerabile:** pacientii cu boala cronica avansata (ciroza hepatica), hepatocarcinom, afectiuni autoimune si pacientii transplantati
- Se descriu **rare cazuri de ACLF** la pacientii cu boala hepatica avansata
- Agentii terapeutici utilizati in boala simptomatice au potential hepatotoxic (Remdesivir, clorochina/hidroxiclorochina, tocilizumab); este dificil de precizat daca modificarea LFTs este datorata bolii sau medicatiei COVID



Recomandari

- Pacientii cu teste hepatice alterate si COVID-19 **trebuie evaluati pentru alte cauze potentiale de afectare hepatica** (serologia VHB, VHC, boli autoimune etc.)
- Prezenta testelor hepatice alterate **nu contraindica terapia investigationala off-label pentru COVID-19** daca aceasta este considerata necesara
- **Monitorizarea biochimica regulata** este obligatorie in cazul pacientilor sub tratament COVID-19, indiferent de nivelul initial al transaminazelor

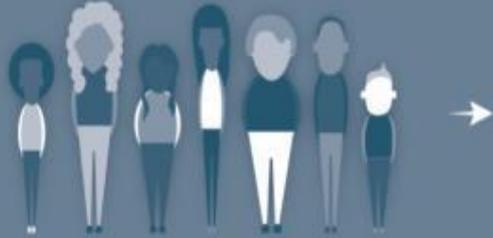


2. Cum sa minimalizam riscul de infectie la pacientii cu afectiuni hepatice?

Masuri generale



General public*



- Wash hands frequently
- Maintain social distancing (at least 1 m distance)
- Avoid touching eyes, nose and mouth
- Cover mouth and nose when you cough or sneeze
- If you have fever, cough or difficulty breathing, seek medical care early
- Stay informed and follow advice given by your healthcare provider

- Distantarea sociala a fost sugerata sau implementata la nivel global
- Purtarea mastilor care sa acopere nasul si gura (in spatii inchise/in apropierea altor persoane)
- Evitarea aglomeratiei si utilizarii spatiilor publice (comerciale, alimentare, de cosmetica, transport, sali sport, sali lectura, toalete etc.)(contagiozitatea si caile de infectie)
- Sfaturi: stoc de medicamente, alimente etc.

Trebuie descurajati pacientii sa vina la spital ?



Managementul si supravegherea pacientilor cu ACLD, pe WL/transplantati, imunodeprimati prin boala/tratament se desfasoara, de regula, in unitati mari/centre dedicate de hepatologie expuse la contactul cu pacienti infectati SARS-CoV-2 – risc crescut de infectie nosocomiala

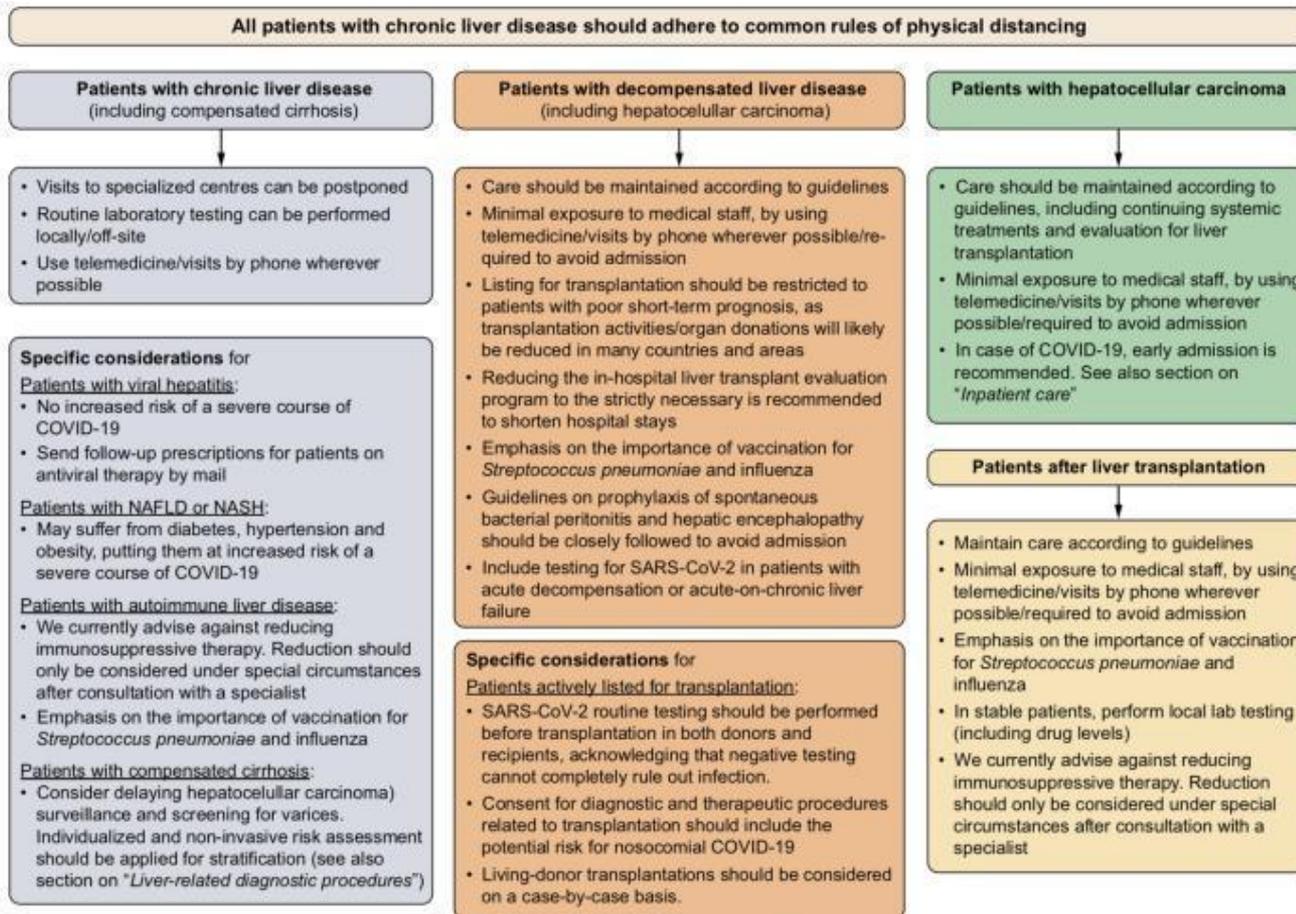
- Facilitatile si staff-ul acestor centre pot fi expuse si capacitate de cazurile COVID, programul si conditiile noi de activitate
- **Contactul cu personalul si facilitatile medicale trebuie minimalizat**
 - pacientii trebuie descurajati sa vina la spital in etapa transmiterii comunitare (50% infectati in spital intr-un studiu din China)
 - consultatiile medicale → „virtuale” (telefonice/online) – platforme tehnice care sa asigure consilierea, masurile generale, explicarea managementului & strategiei tx
 - investigatiile de monitorizare transferate MF/MS locali, efectuate in facilitati locale sigure si accesibile
 - prescriptiile terapeutice oferite online
 - procedurile elective si screeningul (HCC, varice etc.) trebuie amanate
 - externalizarea manevrelor de dg si tratament: ecografii, perfuzii, paracenteze etc.

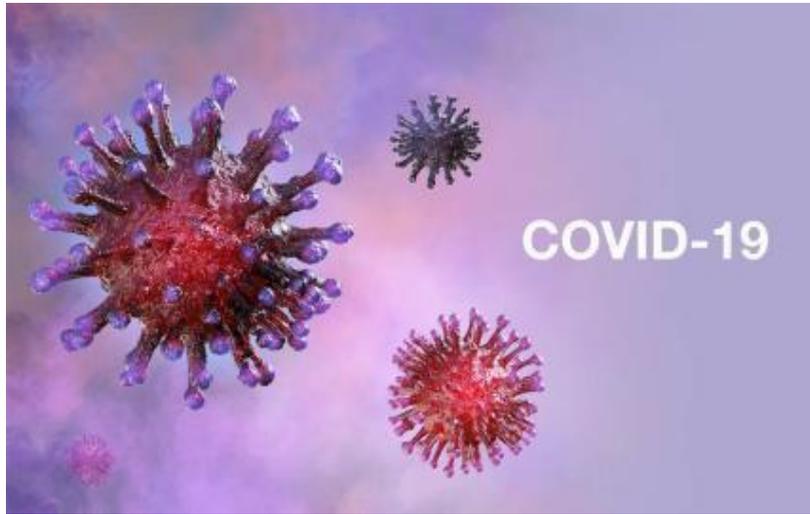
Cum re-organizam activitatea medicala si de cercetare ?

- **Reorganizarea spatiilor** – sali de asteptare cu respectarea distantei de 1.5-2 m intre pacienti/asteptarea in afara cladirii, programari pe ore, limitarea duratei contactului la 15 min
- **Limitarea numarului & prioritizarea contactelor fata-in-fata** medic-pacient
- Spitalele trebuie sa gaseasca **solutiile tehnice care sa asigure calitatea asistentei medicale** pentru pacientii hepatici vulnerabili/la risc, in conditii de pandemie
- **Conditii stricte de igiena si siguranta pentru pacienti si personalul medical**, in acord cu recomandarile nationale si locale & instruirea personalului cu privire la PPE (procoloale de lucru, circuite bine definite, proceduri operationale) in scopul minimalizarii riscului de infectie
- Pentru pacientii fara alternative terapeutice **se recomanda includerea in trialuri clinice**
- **Pentru studiile in derulare, se va cere sponsorului sa fie de acord cu modificarea scenariului:** 1) amanarea vizitelor de follow-up ne-necesare/inlocuirea cu vizite virtuale; 2) identificarea lab locale pentru testele prevazute; 3) distributia medicatiei la domiciliu; pacientii pot veni in spital doar pentru vizite cheie: re-randomizare, end of induction, end of study) si pentru tx perfuzabile (asigurandu-se astfel un echilibru intre nevoia de tx inovatoare a pacientului si masurile guvernamentale/locale)
- **Masurile depind de situatia locala si de reglementarile (hotarari, ordine) oficiale**



3. Categoriile de pacienti hepatici si masurile generale si specifice recomandate





3. Pacientii cu boala hepatica compensata & COVID-19

Patients with chronic liver disease
(including compensated cirrhosis)

- Visits to specialized centres can be postponed
- Routine laboratory testing can be performed locally/off-site
- Use telemedicine/visits by phone wherever possible

Specific considerations for

Patients with viral hepatitis:

- No increased risk of a severe course of COVID-19
- Send follow-up prescriptions for patients on antiviral therapy by mail

Patients with NAFLD or NASH:

- May suffer from diabetes, hypertension and obesity, putting them at increased risk of a severe course of COVID-19

Patients with autoimmune liver disease:

- We currently advise against reducing immunosuppressive therapy. Reduction should only be considered under special circumstances after consultation with a specialist
- Emphasis on the importance of vaccination for *Streptococcus pneumoniae* and influenza

Patients with compensated cirrhosis:

- Consider delaying hepatocellular carcinoma surveillance and screening for varices. Individualized and non-invasive risk assessment should be applied for stratification (see also section on "Liver-related diagnostic procedures")

- **Pacientii cu hepatite virale**
 - Programele de screening, preventie, tratament suspendate temporar/low-work profile
 - Amanarea initiilor
 - Dificultati de prescriptie (on-line, multi-lunare: 3-6 luni)
- **Pacientii cu NAFLD/NASH**
 - Risc crescut de forme severe COVID-19 (co-morbiditati)
- **Pacientii cu boli autoimune si colestatice**
 - Nu au un risc crescut de infectie/forme severe SARS-Cov-2
 - Continuarea tratamentul imunosupresor
 - Vaccinare anti-pneumococica si anti-influenza suspendarea temporara a tiopurinelor si minimalizarea dozelor de corticosteroizi in caz de limfopenie
- **Pacientii cu ciroza compensata**

Minimal exposure to medical staff, by using telemedicine/visits by phone/e-mail wherever possible/required to avoid admission

Impactul negativ asupra programelor de screening, preventie si tratament in hepatitele virale

Maintaining essential hepatitis services



Challenges reported

- Situation in countries dependent on degree of lockdown
- Continuity of ART is top priority in all countries. Hepatitis treatment interruptions lesser problem
- Staff at MOH and hospitals re-purposed to support COVID-19
- Suspension of routine clinics
- Testing and Prevention efforts affected
- Viral load testing affected as personnel & machines deployed for COVID-19.
- Specimen transportation affected by lockdown

Recommended Approach

- Ensure continued treatment with **multi-month** prescriptions (3-6 months)
- Consider postponement of initiation for those not yet on treatment
- Harm-reduction services for PWID
 - Continued access to needles and syringes
 - Extended and take-home doses of methadone or buprenorphine for those stable on opioid substitution therapy

Impact of COVID-19 on the National Viral Hepatitis Program

Baseline		Post-COVID	
Number of NCCVH Units	123	Working regularly	30 24.4%
Total Received treatment in Presidential initiative	1,069,524	Low work profile	89 72.4%
Total enrolled patients in F/U program for liver cirrhosis	50,000	Stopped Working	4 3.3%
Total enrolled patients in HBV program	9,000		

- All screening programs (Non-Egyptians, Prisoners, Pregnant women) are temporarily stopped.
- School screening program temporarily stopped as schools are closed.
- The HBV Program still faces difficulties due to shortage of medicine.
- Shortage in research funding and withheld patient recruitment in clinical trials.



EASL/WHO webinar COVID-19 and the Liver, Thursday 31st May 2020

Patients with decompensated liver disease
(including hepatocellular carcinoma)

- Care should be maintained according to guidelines
- Minimal exposure to medical staff, by using telemedicine/visits by phone wherever possible/required to avoid admission
- Listing for transplantation should be restricted to patients with poor short-term prognosis, as transplantation activities/organ donations will likely be reduced in many countries and areas
- Reducing the in-hospital liver transplant evaluation program to the strictly necessary is recommended to shorten hospital stays
- Emphasis on the importance of vaccination for *Streptococcus pneumoniae* and influenza
- Guidelines on prophylaxis of spontaneous bacterial peritonitis and hepatic encephalopathy should be closely followed to avoid admission
- Include testing for SARS-CoV-2 in patients with acute decompensation or acute-on-chronic liver failure

Specific considerations for

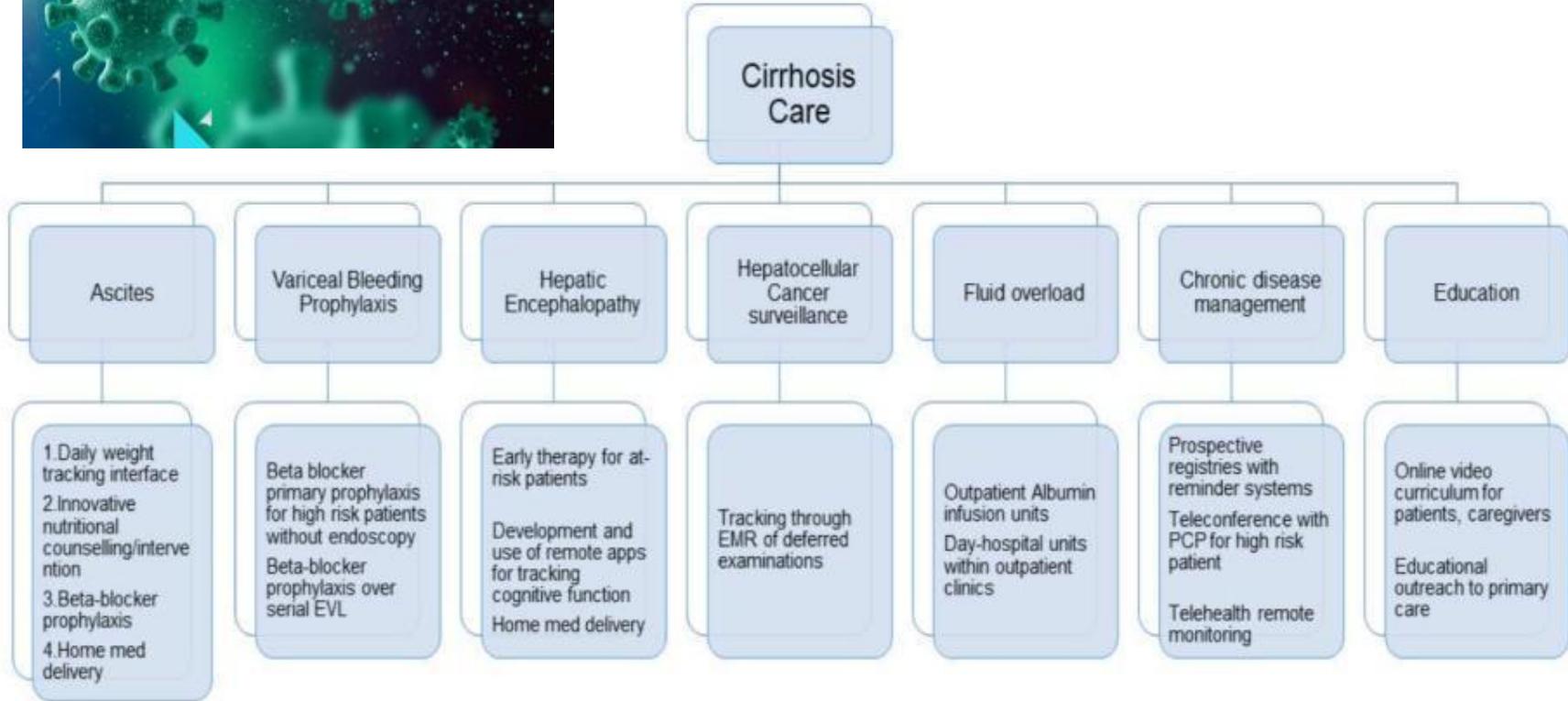
Patients actively listed for transplantation:

- SARS-CoV-2 routine testing should be performed before transplantation in both donors and recipients, acknowledging that negative testing cannot completely rule out infection.
- Consent for diagnostic and therapeutic procedures related to transplantation should include the potential risk for nosocomial COVID-19
- Living-donor transplantations should be considered on a case-by-case basis.

- Date incerte despre efectul infectiei SARS-CoV-2 asupra pacientilor cu CH decompensata sau aflati pe WL
- Limitarea numarului pacientilor pentru spitalizare/evaluare (HCC, MELD mare, complicatii severe, beneficiu/risc)
- Alternativa telemedicinii pentru evaluare lab/imagistica atunci cand este clinic necesara (nu actualizare MELD!)
- Online: rețete pentru 1-3 luni, stoc medicamente, ajustare doze
- Distantare sociala, suport psihologic – atentie alcoolici!
- Programe de educatie si suport prin videoconferinte/telefon cu pacientul si membrii familiei
- Internare dupa un chestionar riguros telefonic cu privire la simptome (respiratorii si digestive), date de lab, imagistica locala
- Internarea in spital decisa atunci cand complicatiile cirozei nu pot fi controlate la distanta
- Testarea SARS-CoV-2 a tuturor pacientilor admisi cu complicatii (infectioase, EH, respiratorii, etc.)
- Testarea secventiala a tuturor pacientilor spitalizati & izolare individuala
- Atentie la semnificatia citolizei!
- Evitarea spitalizarii pacientilor cu simptome (respiratorii) suspecte in clinicile de transplant



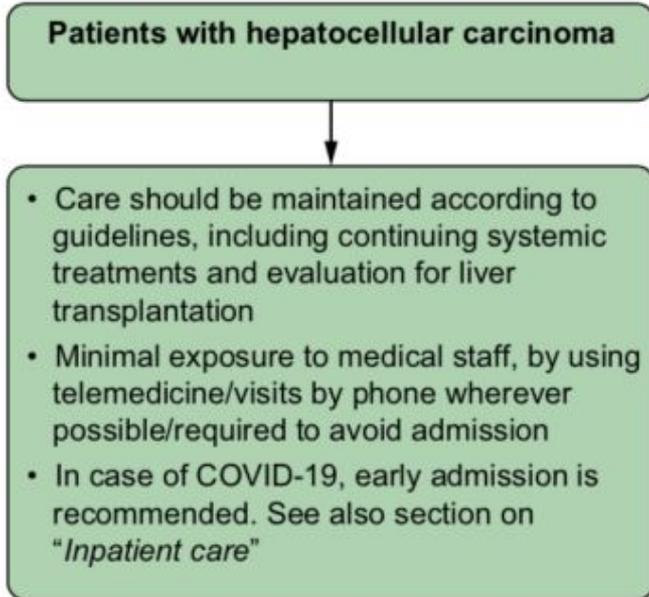
Re-modelarea asistentei medicale pentru pacientii cu ciroza decompensata si aflatii pe WL



Pacientii spitalizati

- Reducerea la minimum a contactelor cu personalul (la risc de infectie), a consulturilor interdisciplinare (dietetician, psiholog, neurolog, cardiolog, diabetolog etc. – cu exceptia urgentelor majore) este critica pentru reducerea expunerii la SARS-CoV-2
- Consulturi „virtuale” atunci cand e nevoie de opinia si recomandarile altor specialisti
- Excluderea personalului neesential (studenti, rezidenti, personal de cercetare etc.)
- Evitarea transportului pacientului intre diverse facilitati medicale – atunci cand sunt absolut necesare vor fi facute cu respectarea circuitelor
- Vizitele se vor efectua cu personal minim, esential pentru acordarea ingrijirilor necesare
- Revizuirea atenta a cererilor de investigatii (analize, imagistica, endoscopie etc) pentru conservarea resurselor si limitarea expunerii
- Interzicerea vizitelor apartinatorilor
- Utilizarea PPE conform recomandarilor si instruirea adecvata pentru echipare/dezechipare, adaptare la conditiile concrete
- Atentie la persoanele varstnice (>70 ani), imunodeprimite, cu co-morbiditati ! – RESTRICTIONAREA ACCESULUI
- Organizarea circuitelor necesare pentru externarea sau transferul in alte clinici/servicii (reabilitare, ingrijiri paliative, servicii la domiciliu) si pentru monitorizarea ulterioara la domiciliu

Pacientii cu HCC/tumori hepatice



- Se recomanda continuarea supravegherii clasice pentru HCC in limita posibilitatilor si in conditii de siguranta – deoarece amanarea prelungita pe durata incerta a pandemiei schimba prognosticul acestor pacienti
- O amanare arbitrara de maximum 2 luni este rezonabila
- Evaluari lab locale cu transmiterea rezultatelor
- Evaluarea imagistica a pacientilor existenti si nou diagnosticati cu un expert radiolog, in Comisia/meetingul de tumori inainte de programarea unei consultatii in persoana
- Consultatii virtuale pentru discutarea managementului
- Selectia terapiei cu respectarea ghidurilor de buna practica actuale
- Initierea terapiei decise fara intarziere
- Spitalizarea pentru terapia loco-regionala cu respectarea circuitelor, testare secventiala, izolare

2020 AASLD. Clinical insight for hepatology and liver transplant providers during the COVID-19 pandemic. WWW.AASLD.ORG

Boettler T, Newsome PN, Mondelli MU, Maticic M, Cordero E, Cornberg M, Berg T. Care of patients with liver disease during the COVID-19 pandemic: EASL-ESCMID position paper. JHEP Reports 2020 vol. 2 j 100113

Alocarea grefelor

- Desi se recomanda evitarea interventiilor chirurgicale non-urgente si neesentiale, activitatea de transplant este exceptata de la acesta decizie
- Se recomanda dezvoltarea unor protocoale si proceduri operationale specifice pandemiei SARS-CoV-2
- Revizuirea datelor donorului pentru factori de risc/expunere SARS-CoV-2, simptome (febra, respiratorii etc.), imagini rx/CT pulmonare
- Confirmarea disponibilitatii personalului, paturilor ATI, ventilatoarelor, PPE disponibile
- Notificarea candidatilor cu privire la cresterea timpului de asteptare pe WL in cursul pandemiei
- Confirmarea si testarea produsilor de sange disponibili (in special masa trombocitara, san fenotipat)
- Evaluarea telefonica a potentialilor receptori pentru simptomele COVID-19 inainte de a fi chemati pentru LTx – cat mai tarziu acceptabil pentru a minimaliza expunere
- Testarea PCR SARS-CoV-2 a receptorilor din exudatul nazal (sensibilitate 65%), ?faringian (32%), lavaj bronsic (93%) – multiple – pentru reducerea probabilitatii testarii *fals negative*
- Receptorii *back-up* asteapta de preferat acasa sau in spatii sigure, distincte
- Se recomanda suspendarea programelor LDLT – exceptiile discutate in Board-ul de LTx
- Consimtamant specific cu informarea asupra riscului infectiei nosocomiale

American Society of Transplantation. 2019-nCoV (Coronavirus): FAQs for organ donation and transplantation. Updated 20 Mar 2020.
<https://www.myast.org/sites/default/files/COVID19%20FAQ%20Tx%20Centers%2003.20.2020- FINAL.pdf>.

2020 AASLD. Clinical insight for hepatology and liver transplant providers during the COVID-19 pandemic. WWW.AASLD.ORG

Boettler T, Newsome PN, Mondelli MU, Maticic M, Cordero E, Cornberg M, Berg T. Care of patients with liver disease during the COVID-19 pandemic: EASL-ESCMID position paper. JHEP Reports 2020 vol. 2 j 100113

Pacientii transplantati hepatic: Ce stim? Care sunt recomandarile?

Patients after liver transplantation

- Maintain care according to guidelines
- Minimal exposure to medical staff, by using telemedicine/visits by phone wherever possible/required to avoid admission
- Emphasis on the importance of vaccination for *Streptococcus pneumoniae* and influenza
- In stable patients, perform local lab testing (including drug levels)
- We currently advise against reducing immunosuppressive therapy. Reduction should only be considered under special circumstances after consultation with a specialist

- Date actuale sugereaza ca reactivarea imunitatii innascute este principalul factor determinant al injuriei pulmonare in COVID-19, iar tratamentul imunosupresor poate avea efect protector
- Totusi, pacientii >60 ani, imunodeprimati si cu multiple co-morbiditati sunt considerati vulnerabili la infectia SARS-CoV-2
- Imunosupresia post-LTx nu pare a fi un factor de risc asociat cu mortalitatea la acesti pacienti (ca si in precedentele pandemii SARS-CoV (2003-2004) si MERS (2012-prezent))
 - Imunosupresia nu trebuie redusa/modificata in afara recomandarilor uzuale ale specialistului din centrul de LTx
 - Insistati asupra respectarii recomandarilor generale
 - Distantarea sociala, sa nu se deplaseze
 - Utilizarea telemedicinii pentru supraveghere si evitarea consulturilor in persoana
 - Tele-munca profesionala

D'Antiga, L. Coronaviruses and immunosuppressed patients. The facts during the third epidemic. Liver Transpl 2020 [Epub ahead of print]

2020 AASLD. Clinical insight for hepatology and liver transplant providers during the COVID-19 pandemic. WWW.AASLD.ORG

Boettler T, Newsome PN, Mondelli MU, Maticic M, Cordero E, Cornberg M, Berg T. Care of patients with liver disease during the COVID-19 pandemic: EASL-ESCMID position paper. JHEP Reports 2020 vol. 2 j 100113

Procedurile la pacientii cu afectiuni hepatice: Ce stim? Care sunt recomandarile?

- Transmiterea fecal-orală a SARS-CoV-2 posibilă (detectat în salivă, fecale)
- Procedurile endoscopice trebuie considerate cu risc înalt de diseminare a infecției (generatoare de aerosoli)
- Personalul implicat în efectuarea manevrelor endoscopice trebuie echipat PPE adecvat (combinezon, bonetă/capelină, mănuși, mască FFP2/3, botosi, ochelari/preferabil viziera)
- Amanarea procedurilor electivă/non-urgente (endoscopii, biopsii hepatice etc.): „*strogly consider rescheduling non-urgent endoscopic procedures*” exceptând PBH pentru diagnosticul HAI, paracentezele terapeutice, TIPS, TACE/TARE, endoscopia pentru hemoragia variceală/controlul ligaturii, proceduri biliare endo/radiologice
- Limitarea accesului rezidenților, personalului ne-necesar
- Corectă dezinfectie a suprafețelor, camerei, ariei de așteptare, lifturi etc. după cazurile suspecte/confirmate COVID-19

Endoscopia digestiva



- Screeningul varicelor eso-gastrice rezervat pacientilor cu risc crescut (istoric hemoragie variceala, criterii HTPo semnificativa – ascita, $Tr < 100,000/mmc$)
- ERCP pentru dilatare/stent dupa evaluarea atenta a raportului risc/beneficiu (colangita, CSP, post-LTx), inclusiv riscul nooscomial local pentru SARS-CoV-2
- Urgentele COVID-19 pozitive (hemoragia digestiva superioara/inferioara, colangita, pancreatita acuta biliara, disfagia completa ce afecteaza alimentatia, paliatia obstructiei GI) sau situatiile de malpraxis COVID pozitive (diagnosticul afectiunilor maligne) efectuate pe circuite/sali dedicate cu personal echipat corespunzator

Examinarea ecografica

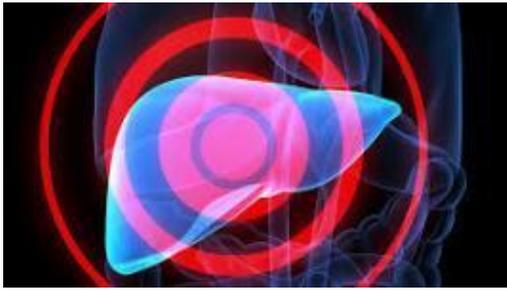


Pacientii COVID-19 negativi

- Supravegherea HCC trebuie adaptata la resursele si situatia locala
- Pacientii cu risc crescut (AFP crescut, ciroza decompensata, ciroza NASH si diabet, hemocromatoza, ciroza si hepatita cronica B cu fibroza avansata/replicare inalta etc. pot fi prioritizati in conditiile resurselor limitate

Pacientii COVID-19 pozitivi

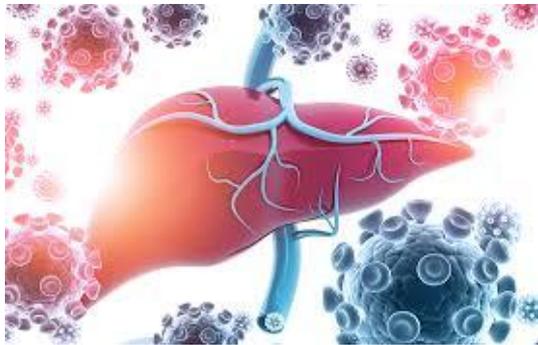
- Amanarea supravegherii dupa convalescenta



Biopsia hepatica

- **Recomandarea de PBH depinde de situatia COVID locala si de indicatia individuala**
- Riscul biopsiei hepatice de transmitere a SARS-CoV-2 este neclar (virusul nu a fost identificat pana acum in ficat, dar expresia receptorilor specifici pe colangiocite si hepatocite este cunoscuta)
- **Indicatia de PBH este justificata in urmatoarele situatii:**
 - Transaminaze crescute $>5-10 \times N$, de etiologie necunoscuta (in cazul suspiciunii inalte de HAI, initierea tratamentului imunosupresor fara examen histologic, este permisa dupa o decizie individualizata)
 - Mase hepatice cu criterii maligne
- **Amanarea procedurii este indicata in urmatoarele situatii**
 - Grading si staging in hepatitele virale/NASH
 - Transaminaze crescute moderat ($3-5 \times N$ de etiologie necunoscuta)
 - Manifestarile si tratamentul COVID-19 sunt predominante

Recomandari generale si specifice in cazul pacientilor cu boli hepatice COVID-19 pozitivi



- **Internare precoce** – in cazurile simptomatice/pacienti cu boala hepatica avansata/ in prezenta factorilor de risc
- Evitarea supradozarii acetaminofenului (<2-3 g/zi) la pacientii fara boala hepatica alcoolica
- Evitarea AINS la pacientii cu ciroza hepatica si HTPo
- Initierea tratatamentelor ne-esentiale pe termen scurt (antivirale etc.) poate fi amanata
- Exceptie reactivari virale acute, initierea terapiei imunosupresoare etc.
- Initierea tratatamentelor Tratamentul specific al pacientilor cu ciroza decompensata si complicatii (hemoragie, variceala, peritonita bacteriana spontana, ascita refractara, sindrom hepato-renal etc.) **TREBUIE INITIAT IMEDIAT sau CONTINUAT**
- **Tratamentul loco-regional pentru HCC** va fi amanat, iar **terapia sistemica** cu inhibitori checkpoint suspendata temporar; tratamentul sistemic cu inhibitori kinaza – intrerupt/reducerea dozelor la decizia medicului, de la caz la caz, in functie de severitatea COVID-19
- **La pacientii transplantati** in terapie anti-SARS-CoV-2 e necesara ajustarea corespunzatoare a dozelor de inhibitori de canceurina si mTOR

Volume 35 Issue 5 May 2020
ISSN: 0815-9319
wileyonlinelibrary.com/journal/jgh

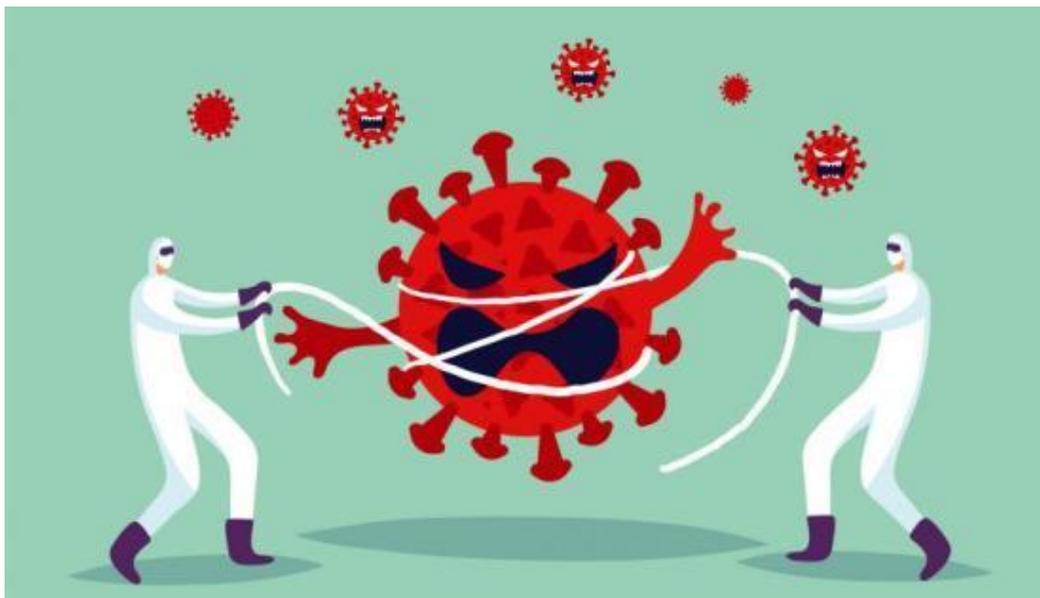
Journal of Gastroenterology and Hepatology

COVID 19 changes the practice
of Gastroenterology and
Hepatology globally



JGHF
Journal of Gastroenterology
and Hepatology Foundation

WILEY



Va multumim pentru participare