**Table S3：**

**Predicted Values and 95% Confidence Intervals for Pulmonary Tuberculosis (PTB) Incidence from Three Models (2007–2023): (A) SARIMA Model, (B) Prophet Model, (C) LSTM Model.**

1. SARIMA Model

|  |  |  |  |
| --- | --- | --- | --- |
| Time | Predicted Value | The 95% confidence interval for the predicted value | |
| Lower limit | Upper limit |
| Jan-20 | 73269.17 | 59633.21 | 86905.12 |
| Feb-20 | 68276.52 | 54445.01 | 82108.03 |
| Mar-20 | 91349.84 | 77325.50 | 105374.19 |
| Apr-20 | 88027.38 | 73812.82 | 102241.94 |
| May-20 | 87457.92 | 73055.66 | 101860.18 |
| Jun-20 | 87833.31 | 73245.76 | 102420.85 |
| Jul-20 | 84409.55 | 69639.04 | 99180.06 |
| Aug-20 | 81443.72 | 66492.48 | 96394.96 |
| Sep-20 | 76991.98 | 61862.18 | 92121.78 |
| Oct-20 | 67724.15 | 52417.86 | 83030.43 |
| Nov-20 | 67842.32 | 52361.56 | 83323.08 |
| Dec-20 | 67105.99 | 51452.71 | 82759.27 |
| Jan-21 | 72642.29 | 55523.09 | 89761.49 |
| Feb-21 | 63391.31 | 45993.36 | 80789.26 |
| Mar-21 | 92781.81 | 75109.50 | 110454.12 |
| Apr-21 | 85200.28 | 67257.81 | 103142.75 |
| May-21 | 84229.39 | 66020.76 | 102438.01 |
| Jun-21 | 76690.64 | 58219.70 | 95161.58 |
| Jul-21 | 78009.14 | 59279.55 | 96738.72 |
| Aug-21 | 76613.99 | 57629.28 | 95598.70 |
| Sep-21 | 71048.60 | 51812.15 | 90285.05 |
| Oct-21 | 65560.99 | 46076.05 | 85045.93 |
| Nov-21 | 67958.05 | 48227.76 | 87688.35 |
| Dec-21 | 66355.25 | 46382.61 | 86327.89 |
| Jan-22 | 68597.35 | 48253.00 | 88941.71 |
| Feb-22 | 59293.64 | 38694.08 | 79893.21 |
| Mar-22 | 84260.88 | 63409.23 | 105112.53 |
| Apr-22 | 82186.15 | 61085.43 | 103286.87 |
| May-22 | 80068.12 | 58721.22 | 101415.01 |
| Jun-22 | 79755.51 | 58165.25 | 101345.76 |
| Jul-22 | 76429.22 | 54598.31 | 98260.12 |
| Aug-22 | 71837.81 | 49768.88 | 93906.75 |
| Sep-22 | 67512.27 | 45207.85 | 89816.69 |
| Oct-22 | 60156.24 | 37618.80 | 82693.69 |
| Nov-22 | 56388.77 | 33620.69 | 79156.85 |
| Dec-22 | 55718.01 | 32721.60 | 78714.42 |
| Jan-23 | 62479.69 | 37422.13 | 87537.24 |
| Feb-23 | 54597.30 | 29160.76 | 80033.85 |
| Mar-23 | 80999.70 | 55189.73 | 106809.68 |
| Apr-23 | 75969.94 | 49791.86 | 102148.02 |
| May-23 | 74885.04 | 48343.96 | 101426.12 |
| Jun-23 | 71448.23 | 44549.05 | 98347.41 |
| Jul-23 | 70241.81 | 42989.24 | 97494.38 |
| Aug-23 | 67657.64 | 40056.19 | 95259.08 |
| Sep-23 | 62716.91 | 34770.95 | 90662.87 |
| Oct-23 | 55606.85 | 27320.56 | 83893.13 |
| Nov-23 | 55953.83 | 27331.27 | 84576.38 |
| Dec-23 | 54830.10 | 25875.18 | 83785.03 |

1. Prophet Model

|  |  |  |  |
| --- | --- | --- | --- |
| Time | Predicted Value | The 95% confidence interval for the predicted value | |
| Lower limit | Upper limit |
| Jan-20 | 75867.25 | 67319.73 | 83566.06 |
| Feb-20 | 72265.30 | 64329.66 | 80108.10 |
| Mar-20 | 98781.71 | 91259.33 | 106349.37 |
| Apr-20 | 94042.02 | 85845.04 | 102051.19 |
| May-20 | 91470.25 | 83318.15 | 98756.66 |
| Jun-20 | 86114.32 | 77976.03 | 93600.12 |
| Jul-20 | 86064.42 | 77900.58 | 93813.88 |
| Aug-20 | 82962.83 | 74899.67 | 90938.50 |
| Sep-20 | 79862.73 | 70984.73 | 87920.89 |
| Oct-20 | 74259.09 | 66409.76 | 81810.55 |
| Nov-20 | 74437.09 | 66216.15 | 83302.64 |
| Dec-20 | 76520.30 | 68480.58 | 84699.67 |
| Jan-21 | 70034.25 | 62074.02 | 78002.83 |
| Feb-21 | 68619.82 | 60415.55 | 76789.13 |
| Mar-21 | 93846.74 | 85775.09 | 101585.53 |
| Apr-21 | 90613.75 | 82746.20 | 98427.01 |
| May-21 | 87254.35 | 79491.97 | 95227.19 |
| Jun-21 | 83429.70 | 75516.20 | 90642.44 |
| Jul-21 | 82804.30 | 75095.55 | 90703.25 |
| Aug-21 | 79774.46 | 71244.28 | 88052.99 |
| Sep-21 | 76424.83 | 69057.96 | 84589.99 |
| Oct-21 | 70890.20 | 63271.04 | 78708.09 |
| Nov-21 | 71646.61 | 63873.77 | 79123.88 |
| Dec-21 | 72936.66 | 65355.34 | 81053.18 |
| Jan-22 | 68085.54 | 60395.17 | 76001.52 |
| Feb-22 | 66086.74 | 58095.36 | 74403.02 |
| Mar-22 | 88989.17 | 81380.18 | 97645.43 |
| Apr-22 | 87168.30 | 79471.91 | 95245.75 |
| May-22 | 83099.20 | 75128.71 | 90677.32 |
| Jun-22 | 80695.84 | 72808.44 | 89258.31 |
| Jul-22 | 79520.68 | 71361.53 | 87431.05 |
| Aug-22 | 76563.58 | 69114.73 | 84222.49 |
| Sep-22 | 72996.69 | 65137.34 | 81072.95 |
| Oct-22 | 67559.28 | 59806.01 | 75457.47 |
| Nov-22 | 68842.08 | 60097.79 | 76634.61 |
| Dec-22 | 69404.62 | 61792.17 | 77629.58 |
| Jan-23 | 66067.69 | 57578.82 | 73966.02 |
| Feb-23 | 63514.05 | 55935.94 | 71611.63 |
| Mar-23 | 84210.99 | 76040.36 | 92124.85 |
| Apr-23 | 83704.98 | 75888.59 | 92057.21 |
| May-23 | 79003.65 | 70859.53 | 86346.66 |
| Jun-23 | 77910.41 | 70095.10 | 85246.31 |
| Jul-23 | 76214.31 | 67801.01 | 83686.50 |
| Aug-23 | 73331.56 | 65058.53 | 81646.39 |
| Sep-23 | 69579.91 | 61014.88 | 77639.27 |
| Oct-23 | 64265.92 | 55899.72 | 72660.55 |
| Nov-23 | 66022.83 | 58145.21 | 74004.94 |
| Dec-23 | 65922.86 | 57394.89 | 73285.45 |

1. LSTM Model

|  |  |  |  |
| --- | --- | --- | --- |
| Time | Predicted Value | The 95% confidence interval for the predicted value | |
| Lower limit | Upper limit |
| Jan-20 | 79241.28 | 78045.99 | 80436.57 |
| Feb-20 | 80114.16 | 78918.87 | 81309.45 |
| Mar-20 | 85263.59 | 84068.31 | 86458.88 |
| Apr-20 | 85926.02 | 84730.73 | 87121.31 |
| May-20 | 86281.15 | 85085.86 | 87476.44 |
| Jun-20 | 86371.78 | 85176.49 | 87567.07 |
| Jul-20 | 82616.45 | 81421.16 | 83811.74 |
| Aug-20 | 78236.20 | 77040.91 | 79431.48 |
| Sep-20 | 74379.92 | 73184.63 | 75575.21 |
| Oct-20 | 70462.03 | 69266.74 | 71657.32 |
| Nov-20 | 67316.88 | 66121.59 | 68512.17 |
| Dec-20 | 65201.45 | 64006.17 | 66396.74 |
| Jan-21 | 63728.90 | 62533.62 | 64924.19 |
| Feb-21 | 64342.86 | 63147.58 | 65538.15 |
| Mar-21 | 72355.38 | 71160.09 | 73550.67 |
| Apr-21 | 76877.37 | 75682.08 | 78072.66 |
| May-21 | 77530.06 | 76334.77 | 78725.35 |
| Jun-21 | 77029.03 | 75833.74 | 78224.32 |
| Jul-21 | 74267.97 | 73072.68 | 75463.26 |
| Aug-21 | 71009.31 | 69814.02 | 72204.59 |
| Sep-21 | 68217.95 | 67022.66 | 69413.24 |
| Oct-21 | 65298.67 | 64103.39 | 66493.96 |
| Nov-21 | 64043.90 | 62848.61 | 65239.18 |
| Dec-21 | 62827.67 | 61632.38 | 64022.95 |
| Jan-22 | 63864.04 | 62668.75 | 65059.32 |
| Feb-22 | 65705.09 | 64509.80 | 66900.38 |
| Mar-22 | 70607.52 | 69412.23 | 71802.81 |
| Apr-22 | 70262.74 | 69067.45 | 71458.03 |
| May-22 | 68374.38 | 67179.09 | 69569.67 |
| Jun-22 | 67216.28 | 66020.99 | 68411.57 |
| Jul-22 | 66011.32 | 64816.04 | 67206.61 |
| Aug-22 | 63497.80 | 62302.51 | 64693.08 |
| Sep-22 | 62561.32 | 61366.03 | 63756.60 |
| Oct-22 | 60435.03 | 59239.74 | 61630.31 |
| Nov-22 | 59184.44 | 57989.15 | 60379.72 |
| Dec-22 | 57871.66 | 56676.37 | 59066.94 |
| Jan-23 | 56095.71 | 54900.43 | 57291.00 |
| Feb-23 | 56382.32 | 55187.03 | 57577.60 |
| Mar-23 | 61554.13 | 60358.84 | 62749.41 |
| Apr-23 | 61860.83 | 60665.55 | 63056.12 |
| May-23 | 64332.43 | 63137.15 | 65527.72 |
| Jun-23 | 64815.50 | 63620.22 | 66010.79 |
| Jul-23 | 62580.91 | 61385.62 | 63776.19 |
| Aug-23 | 58585.11 | 57389.82 | 59780.40 |
| Sep-23 | 54779.87 | 53584.59 | 55975.16 |
| Oct-23 | 53128.57 | 51933.28 | 54323.85 |
| Nov-23 | 53378.70 | 52183.41 | 54573.98 |
| Dec-23 | 55019.47 | 53824.18 | 56214.75 |