**Supplementary Material**

**Cost-effectiveness of** **expanded** **antiviral treatment for chronic hepatitis B virus infection in China: an economic evaluation**

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# **Figure S1. A simplified skeleton diagram of the decision tree used in the model.**



# **Figure S2.** **Schematic diagram of the Markov model for chronic HBV infection and disease progression.**



Abbreviation: CC, compensated cirrhosis; DC, decompensated cirrhosis; HCC, hepatocellular carcinoma; LT, liver transplantation

# **Figure S3. Effect of strategies to reduce mortality attributable to chronic HBV infection implemented from 2028 in China. a, b, c and d, reduced mortality by 2035, 2040, 2045, and 2050, respectively; e, the annual incidence of each strategy that could reach the 65% mortality-reduction target by 2050.**



Abbreviation: THBs, Treating HBsAg+; 30/19, ALT>30/19; 35/25, ALT>35/25; 40, ALT>40; 18–80, 18–80 years; 30–80, 30–80 years; 40–80, 40–80 years.

# **Figure S4. Cumulative incidence of HBV-related complications for 18-80 years implemented from 2028. a, Treating HBsAg+; b, ALT>30/19; c, ALT>35/25; d, ALT>40.**



CC: compensated cirrhosis; DC: decompensated cirrhosis; HCC: hepatocellular carcinoma; RC: Reduced complications

# Figure S5. Effect of strategies to reduce mortality attributable to chronic HBV infection implemented from 2033 in China. a, b and c, reduced mortality in 2040, 2045, and 2050, respectively.



Abbreviation: THBs, Treating HBsAg+; 30/19, ALT>30/19; 35/25, ALT>35/25; 40, ALT>40; 18–80, 18–80 years; 30–80, 30–80 years; 40–80, 40–80 years.

# Figure S6. Cumulative incidence of HBV-related complications for 18–80 years implemented from 2033. a, Treating HBsAg+; b, ALT>30/19; c, ALT>35/25; D, ALT>40.



CC: compensated cirrhosis; DC: decompensated cirrhosis; HCC: hepatocellular carcinoma; RC: Reduced complications

# Figure S7. Tornado diagram demonstrating results of one-way sensitivity analyses of ten most important parameters that affect the cost-effectiveness of HBV treatment.



Abbreviation: Tx, treatment coverage.

# **Table S1. Parameters used in the Markov model.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Base case** |  | **Range** | **PSA distribution** | **Data source** | **Research level** |
| ***Natural disease progression*** |  |  |  |  |  |
| From ALT≤40 U/L to: |  |  |  |  |  |
| ALT>40 U/L | 0.055 | 0.044-0.066 | Beta (18.56, 315.92) | 1 | Economic modelling analysis |
| Seroclearce | 0.0015 | 0.0012-0018 | Point-estimate | 2 | Review |
| CC | 0.009 | 0.0072-0.0108 | Point-estimate | 2 | Review |
| HCC | 0.003 | 0-0.006 | Beta (3.985, 1324.35) | 3 | Economic modelling analysis |
| 20- | 0.0018 | 0.00144-0.00216 |  |  |  |
| 30- | 0.0019 | 0.00152-0.00228 |  |  |  |
| 40- | 0.0033 | 0.00264-0.00396 |  |  |  |
| From ALT>40 U/L to: |  |  |  |  |  |
| ALT≤40 U/L | 0.06 | 0.048-0.072 | Beta (11.97, 196.76) | 4, 5 | Review & Patient cohort level |
| Seroclearce | 0.001 | 0.0005-0.003 |  | 6 | Patient-level |
| CC | 0.038 | 0.022-0.088 | Beta (11.173, 300.92) | 7, 8 | Economic modelling analysis |
| HCC |  |  | Point-estimate |  |  |
| 20- | 0.003 | 0.0024-0.0036 |  |  |  |
| 30- | 0.003 | 0.0024-0.0036 |  |  |  |
| 40- | 0.0061 | 0.00488-0.00732 | Beta (12.596, 1925.30) | 9-14 | Patient-level |
| From ALT≤35 U/L to: \* |  |  |  |  |  |
| ALT~35-40 U/L | 0.0578 | 0.04624-0.06936 | Point-estimate | 1, 4 | Economic modelling analysis |
| ALT>40 U/L | 0.05253 | 0.04202-0.06303 | Point-estimate | 3, 4 | Economic modelling analysis |
| Seroclearce | 0.0017 | 0.00136-0.00204 | Point-estimate |  |  |
| CC | 0.005 | 0.004-0.006 | Beta (0.154, 30.69) | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.00171 | 0.00137-0.00205 |  |  |  |
| 30- | 0.00181 | 0.00144-0.00217 |  |  |  |
| 40- | 0.00314 | 0.00251-0.00376 |  |  |  |
| From ALT≤25 U/L to: \* |  |  |  |  |  |
| ALT~25-40 U/L | 0.0571 | 0.04568-0.06852 | Point-estimate | 1, 4 | Economic modelling analysis |
| ALT>40 U/L | 0.05709 | 0.04567-0.06851 | Point-estimate | 1, 4 | Economic modelling analysis |
| Seroclearce | 0.0019 | 0.00152-0.00228 | Point-estimate |  |  |
| CC | 0.0045 | 0.0036-0.0054 | Point-estimate | 15 | Patient-level |
| HCC |  |  |  | 15 | Patient-level |
| 20- | 0.00161 | 0.00129-0.00193 |  |  |  |
| 30- | 0.00170 | 0.00136-0.00204 |  |  |  |
| 40- | 0.00230 | 0.00236-0.00354 |  |  |  |
| From ALT≤30 U/L to: \* |  |  |  |  |  |
| ALT~30-40 U/L | 0.05775 | 0.0462-0.0693 | Beta (11.971, 196.76) | 1, 4 | Economic modelling analysis |
| ALT>40 U/L | 0.05225 | 0.0418-0.0627 | Point-estimate | 1, 4 | Economic modelling analysis |
| Seroclearce | 0.00173 | 0.00138-0.00207 | Point-estimate |  |  |
| CC | 0.0047 | 0.0038-0.0057 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.00166 | 0.00132-0.00199 |  |  |  |
| 30- | 0.00175 | 0.00140-0.00210 |  |  |  |
| 40- | 0.00304 | 0.00243-0.00364 | Beta (3·985, 1324·35) |  |  |
| From ALT≤19 U/L to: \* |  |  |  |  |  |
| ALT~19-40 U/L | 0.05693 | 0.04554-0.06831 | Point-estimate | 1 | Economic modelling analysis |
| ALT>40 U/L | 0.05198 | 0.04158-0.06237 | Point-estimate | 1 | Economic modelling analysis |
| Seroclearce | 0.00195 | 0.00156-0.00234 | Point-estimate |  |  |
| CC | 0.004 | 0.0032-0.0048 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.00144 | 0.00115-0.00173 |  |  |  |
| 30- | 0.00152 | 0.00122-0.00182 |  |  |  |
| 40- | 0.00264 | 0.00211-0.00317 |  |  |  |
| ***Treatment-related annual transition estimates*** |  |  |  |  |  |
| From ALT>40 U/L to: |  |  | Point-estimate |  |  |
| ALT≤40 U/L | 0.078 | 0.0624-0.0936 | Point-estimate | 16 | Economic modelling analysis |
| Seroclearce | 0.009 | 0.0072-0.0108 | Point-estimate |  |  |
| CC | 0.006 | 0.003-0.0012 | Point-estimate | 17 | Economic modelling analysis and patient level |
| HCC |  |  | Point-estimate |  |  |
| 20-40 | 0.0016 | 0.0013-0.0019 |  | 18 | Patient-level |
| >=40 | 0.0047 | 0.0033-0.006 |  | 18 | Patient-level |
| From ALT~35-40 U/L to: \* |  |  |  |  |  |
| ALT≤35 U/L | 0.0741 | 0.0593-0.0889 | Beta (6.71, 87.82) |  |  |
| Seroclearce | 0.0105 | 0.0084-0.0126 | Point-estimate |  |  |
| CC | 0.0018 | 0.00144-0.00216 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.0012 | 0.00096-0.00144 |  |  |  |
| 30- | 0.00135 | 0.00108-0.00162 |  |  |  |
| 40- | 0.0018 | 0.00144-0.00216 |  |  |  |
| From ALT~25-40 U/L to: \* |  |  |  |  |  |
| ALT≤25 U/L | 0.06396 | 0.05117-0.07675 | Point-estimate | 4 | Review |
| Seroclearce | 0.012 | 0.0096-0.0144 | Point-estimate |  |  |
| CC | 0.0017 | 0.00136-0.00204 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Beta | 15 | Patient-level |
| 20- | 0.00101 | 0.00081-0.00121 | (15.35, 15,334.68) |  |  |
| 30- | 0.00113 | 0.00091-0.00136 |  |  |  |
| 40- | 0.00145 | 0.00116-0.00174 |  |  |  |
| From ALT~30-40 U/L to: \* |  |  |  |  |  |
| ALT≤30 U/L | 0.0663 | 0.0530-0.0796 | Point-estimate | 4 | Review |
| Seroclearce | 0.01125 | 0.009-0.0135 | Point-estimate |  |  |
| CC | 0.00175 | 0.0014-0.0021 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.00106 | 0.00084-0.00127 |  |  |  |
| 30- | 0.00119 | 0.00095-0.00143 |  |  |  |
| 40- | 0.00170 | 0.00136-0.00204 |  |  |  |
| From ALT~19-40 U/L to: \* |  |  |  |  |  |
| ALT≤19 U/L | 0.06162 | 0.04930-0.07394 | Point-estimate | 4, 19 | Review |
| Seroclearce | 0.01215 | 0.00972-0.01458 | Point-estimate |  |  |
| CC | 0.0016 | 0.00128-0.00192 | Point-estimate | 15 | Patient-level |
| HCC |  |  | Point-estimate | 15 | Patient-level |
| 20- | 0.00096 | 0.00077-0.00115 |  |  |  |
| 30- | 0.00108 | 0.00086-0.00130 |  |  |  |
| 40- | 0.0013 | 0.00104-0.00156 |  |  |  |
| From Compensated cirrhosis to: |  |  |  |  |  |
| Decompensated cirrhosis | 0.019 | 0.009-0.046 | Beta (3.52, 181.17) | 20, 21 | Patient-level |
| Hepatocellular carcinoma | 0.02 | 0.016-0.044 | Beta (24.48, 1199.52) | 22, 23 | Patient-level |
| HBV-related death | 0.017 | 0.012-0.048 | Beta (2.82, 163.29) | 24-26 | Patient-level |
| From Decompensated cirrhosis to: |  |  |  |  |  |
| Hepatocellular carcinoma | 0.024 | 0.006-0.081 | Beta (2,47, 100.63) | 22, 27 | Patient-level |
| Liver transplantation | 0.017 | 0.001-0.042 | Beta (1.25, 72.03) | 20 | Economic modelling analysis |
| HBV-related death | 0.095 | 0.056-0.14 | Beta (5.27, 50.25) | 24 | Patient-level |
| From Hepatocellular carcinoma to: |  |  |  |  |  |
| Liver transplantation | 0.006 | 0.001-0.03 | Beta (1.43, 236.13) | 20 | Economic modelling analysis |
| HBV-related death | 0.26 | 0.25-0.27 | Beta (4.74, 13.50) | 28 | Patient-level |
| ***Utility weight*** |  |  |  |  |  |
| Chronic HBV infection (ALT≤40 U/L) | 0.79 | 0.74-0.84 | Beta (51.63, 13.73) | 29-36 | Patient-level |
| Chronic hepatitis B (ALT>40 U/L) | 0.75 | 0.72-0.79 |  |  |
| Compensated cirrhosis | 0.73 | 0.69-0.78 | Beta (89.19, 32.99) |  |
| Decompensated cirrhosis | 0.65 | 0.63-0.67 | Beta (369.04, 198.71) |  |
| Hepatocellular carcinoma | 0.38 | 0.36-0.41 | Beta (223.44, 364.56) |  |
| Liver transplantation | 0.67 | 0.64-0.69 | Beta (163.93, 80.74) |  |
| ***Demographic*** (***Utility index*)** |  |  |  | 37 |  |
| Gender |  |  |  |  |  |
| Male | 0.986 | Point-estimate |  |  |  |
| Female | 0.984 | Point-estimate |  |  |  |
| Age (in years) |  |  |  |  |  |
| 15-24 | 0.998 | Point-estimate |  |  |  |
| 25-34 | 0.997 | Point-estimate |  |  |  |
| 35-44 | 0.995 | Point-estimate |  |  |  |
| 45-54 | 0.990 | Point-estimate |  |  |  |
| 55-64 | 0.983 | Point-estimate |  |  |  |
| 65-74 | 0.969 | Point-estimate |  |  |  |
| 75+ | 0.933 | Point-estimate |  |  |  |
| ***Costs ($USD)*** |  |  |  |  |  |
| Generic entecavir 0.5mg 21, tablets | 0.55 | 0.44-1.66 | Gamma (25.00,45.45) | 36 |  |
| Generic tenofovir# 300mg 30, tablets | 1.25 | 1-1.5 | Gamma (25.00,20.00) | 36 |  |
| Chronic hepatitis B (treatment) | 1740 | 1000-2310 | Point estimate | 38 | Patient-level |
| Compensated cirrhosis | 4330 | 3460-5200 | Gamma (24.77,0.0057) | 38 | Patient-level |
| Decompensated cirrhosis | 5523 | 4420-6630 | Gamma (25.21,0.0046) | 38 | Patient-level |
| Hepatocellular carcinoma | 7301 | 5840-8760 | Gamma (23.69,0.0032) | 38 | Patient-level |
| Liver transplantation | 35701 | 28560-42840 | Gamma (27.11,1.08) | 38 | Patient-level |
| After liver transplantation,follow-up (per year) | 8393 | 6710-10070 | Gamma (24.37,0.0029) | 39 | Patient-level |
| Discount rate: costs (%) | 5 | 0-8 |  | 40 |  |
| Discount rate: health outcomes (%) | 5 | 0-8 |  | 40 |  |

\*: Assumption according to the cited references.

# Table S2. Characteristics of ALT in chronic hepatitis B infection population.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Age, years | ALT ULN 40 U/L | | ALT ULN 35 U/L for male & 25 U/L for female | | | | | | AL ULN 30 U/L for male & 19 U/L for female | | | | | |
|  |  | Male | | | Female | | | Male | | | female | | |
|  | >40 U/L | ≤40 U/L | >40 U/L | 35-40 U/L | ≤35 U/L | >40 U/L | 25-40 U/L | ≤25 U/L | >40 U/L | 30-40 U/L | ≤30 U/L | >40 U/L | 19-40 U/L | ≤19 U/L |
| 18- | 0.1741 | 0.8259 | 0.1259 | 0.0370 | 0.2852 | 0.0481 | 0.1296 | 0.3472 | 0.1259 | 0.0741 | 0.2481 | 0.0481 | 0.2074 | 0.2964 |
| 30- | 0.1965 | 0.8035 | 0.1304 | 0.0370 | 0.2724 | 0.0661 | 0.1187 | 0.3754 | 0.1304 | 0.0739 | 0.2354 | 0.0661 | 0.1907 | 0.3035 |
| 40- | 0.1707 | 0.8293 | 0.1123 | 0.0310 | 0.3049 | 0.0584 | 0.1529 | 0.3405 | 0.1123 | 0.0625 | 0.2734 | 0.0584 | 0.2524 | 0.2410 |
| total | 0.1755 | 0.8245 | 0.1166 | 0.0329 | 0.2971 | 0.0588 | 0.1449 | 0.3496 | 0.1166 | 0.0655 | 0.2645 | 0.0588 | 0.2376 | 0.2568 |

# Table S3. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by 2030.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2030 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 11,311 | 805 | 3,922 | 3,116 | 2,323 | 511,326 | 536,340 | 0 |
| 18-80 | ALT>40 | 40 | 9,021 | 659 | 3,703 | 2,860 | 2,941 | 592,529 | 536,961 | 130,814 |
|  |  | 60 | 7,777 | 568 | 3,570 | 2,695 | 3,294 | 640,083 | 537,403 | 121,154 |
|  |  | 80 | 7,020 | 507 | 3,483 | 2,582 | 3,517 | 670,756 | 537,729 | 114,832 |
| 18-80 | THBs | 20 | 7,034 | 577 | 2,558 | 2,198 | 7,555 | 1,151,796 | 542,644 | 101,605 |
|  |  | 40 | 3,821 | 345 | 1,849 | 1,553 | 10,019 | 1,435,260 | 546,421 | 91,656 |
|  |  | 60 | 2,519 | 223 | 1,503 | 1,199 | 11,129 | 1,555,875 | 548,623 | 85,040 |
|  |  | 80 | 1,873 | 153 | 1,308 | 987 | 11,728 | 1,619,457 | 550,012 | 81,051 |
|  | ALT>30/19 | 20 | 8,855 | 667 | 3,269 | 2,646 | 4,259 | 753,277 | 539,939 | 67,231 |
|  |  | 40 | 5,758 | 458 | 2,803 | 2,187 | 5,657 | 917,553 | 542,425 | 66,762 |
|  |  | 60 | 4,256 | 336 | 2,544 | 1,910 | 6,383 | 997,436 | 543,980 | 63,631 |
|  |  | 80 | 3,410 | 259 | 2,386 | 1,731 | 6,813 | 1,043,054 | 545,016 | 61,290 |
|  | ALT>35/25 | 20 | 9,335 | 688 | 3,461 | 2,768 | 3,712 | 667,343 | 539,302 | 52,675 |
|  |  | 40 | 6,283 | 487 | 3,049 | 2,354 | 4,890 | 803,873 | 541,305 | 58,922 |
|  |  | 60 | 4,754 | 368 | 2,816 | 2,100 | 5,514 | 871,810 | 542,576 | 57,806 |
|  |  | 80 | 3,875 | 291 | 2,671 | 1,933 | 5,889 | 911,107 | 543,433 | 56,365 |
| 30-80 | ALT>40 | 40 | 9,231 | 673 | 3,711 | 2,876 | 2,885 | 585,111 | 536,904 | 130,810 |
|  |  | 60 | 8,101 | 589 | 3,584 | 2,722 | 3,206 | 628,328 | 537,306 | 121,151 |
|  |  | 80 | 7,413 | 534 | 3,502 | 2,617 | 3,408 | 656,208 | 537,602 | 114,826 |
|  | THBs | 20 | 7,432 | 598 | 2,642 | 2,260 | 7,073 | 1,092,725 | 542,127 | 100,475 |
|  |  | 40 | 4,301 | 374 | 1,968 | 1,642 | 9,368 | 1,357,472 | 545,643 | 90,955 |
|  |  | 60 | 3,003 | 255 | 1,638 | 1,301 | 10,408 | 1,471,305 | 547,702 | 84,495 |
|  |  | 80 | 2,346 | 185 | 1,452 | 1,097 | 10,972 | 1,531,824 | 549,004 | 80,582 |
|  | ALT>30/19 | 20 | 9,080 | 680 | 3,308 | 2,677 | 4,089 | 732,175 | 539,665 | 66,418 |
|  |  | 40 | 6,055 | 476 | 2,858 | 2,233 | 5,420 | 889,170 | 542,007 | 66,676 |
|  |  | 60 | 4,575 | 357 | 2,610 | 1,964 | 6,114 | 966,220 | 543,476 | 63,744 |
|  |  | 80 | 3,737 | 281 | 2,457 | 1,790 | 6,525 | 1,010,532 | 544,458 | 61,492 |
|  | ALT>35/25 | 20 | 9,517 | 699 | 3,487 | 2,791 | 3,589 | 653,578 | 539,061 | 52,290 |
|  |  | 40 | 6,533 | 503 | 3,090 | 2,389 | 4,717 | 785,186 | 540,951 | 59,395 |
|  |  | 60 | 5,030 | 386 | 2,865 | 2,142 | 5,318 | 851,310 | 542,155 | 58,469 |
|  |  | 80 | 4,161 | 310 | 2,724 | 1,979 | 5,679 | 889,840 | 542,969 | 57,103 |
| 40-80 | ALT>40 | 40 | 9,644 | 700 | 3,753 | 2,924 | 2,772 | 570,199 | 536,787 | 131,780 |
|  |  | 60 | 8,738 | 633 | 3,651 | 2,800 | 3,030 | 604,736 | 537,105 | 122,084 |
|  |  | 80 | 8,185 | 589 | 3,584 | 2,716 | 3,192 | 627,038 | 537,340 | 115,733 |
|  | THBs | 20 | 8,168 | 638 | 2,886 | 2,424 | 6,177 | 983,568 | 541,115 | 98,909 |
|  |  | 40 | 5,188 | 428 | 2,293 | 1,870 | 8,157 | 1,213,953 | 544,126 | 90,239 |
|  |  | 60 | 3,897 | 313 | 1,998 | 1,561 | 9,068 | 1,315,506 | 545,908 | 84,050 |
|  |  | 80 | 3,219 | 245 | 1,829 | 1,372 | 9,568 | 1,370,558 | 547,046 | 80,258 |
|  | ALT>30/19 | 20 | 9,494 | 704 | 3,423 | 2,761 | 3,782 | 694,374 | 539,122 | 65,796 |
|  |  | 40 | 6,598 | 510 | 3,012 | 2,348 | 4,990 | 838,465 | 541,182 | 67,560 |
|  |  | 60 | 5,160 | 396 | 2,782 | 2,095 | 5,625 | 910,623 | 542,486 | 64,968 |
|  |  | 80 | 4,337 | 322 | 2,639 | 1,931 | 6,004 | 952,748 | 543,364 | 62,846 |
|  | ALT>35/25 | 20 | 9,852 | 719 | 3,569 | 2,854 | 3,365 | 628,837 | 538,585 | 52,341 |
|  |  | 40 | 6,992 | 532 | 3,202 | 2,476 | 4,404 | 751,750 | 540,255 | 61,406 |
|  |  | 60 | 5,535 | 419 | 2,993 | 2,243 | 4,961 | 814,799 | 541,329 | 60,831 |
|  |  | 80 | 4,686 | 347 | 2,861 | 2,088 | 5,298 | 852,107 | 542,060 | 59,577 |

Abbreviation: Tx, treatment coverage; THBs, ‘treating-HBsAg+’; CC, compensated cirrhosis; DC, decompensated cirrhosis; HCC, hepatocellular carcinoma; LT, liver transplantation.

# Table S4. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by 2035.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2035 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 15,873 | 1,736 | 6,441 | 6,591 | 4,260 | 909,914 | 753,048 | 0 |
| 18-80 | ALT>40 | 40 | 12,469 | 1,390 | 5,958 | 5,892 | 5,367 | 1,018,352 | 755,011 | 55,243 |
|  |  | 60 | 10,790 | 1,199 | 5,695 | 5,495 | 5,943 | 1,077,738 | 756,274 | 52,023 |
|  |  | 80 | 9,805 | 1,081 | 5,533 | 5,244 | 6,291 | 1,114,840 | 757,145 | 50,019 |
| 18-80 | THBs | 20 | 8,348 | 1,083 | 3,739 | 4,124 | 13,031 | 1,793,161 | 769,679 | 53,108 |
|  |  | 40 | 4,493 | 608 | 2,617 | 2,750 | 16,083 | 2,062,680 | 777,725 | 46,714 |
|  |  | 60 | 3,134 | 404 | 2,139 | 2,125 | 17,310 | 2,167,804 | 781,783 | 43,775 |
|  |  | 80 | 2,471 | 296 | 1,883 | 1,782 | 17,959 | 2,223,444 | 784,173 | 42,202 |
|  | ALT>30/19 | 20 | 11,591 | 1,358 | 5,098 | 5,317 | 7,836 | 1,255,624 | 762,611 | 36,152 |
|  |  | 40 | 7,392 | 895 | 4,217 | 4,192 | 9,978 | 1,435,356 | 768,490 | 34,026 |
|  |  | 60 | 5,583 | 664 | 3,787 | 3,610 | 10,976 | 1,515,503 | 771,751 | 32,379 |
|  |  | 80 | 4,602 | 529 | 3,537 | 3,263 | 11,542 | 1,560,279 | 773,789 | 31,356 |
|  | ALT>35/25 | 20 | 12,431 | 1,428 | 5,440 | 5,625 | 6,946 | 1,146,919 | 760,812 | 30,526 |
|  |  | 40 | 8,174 | 971 | 4,622 | 4,565 | 8,838 | 1,301,852 | 765,771 | 30,806 |
|  |  | 60 | 6,285 | 737 | 4,213 | 4,003 | 9,737 | 1,372,036 | 768,567 | 29,777 |
|  |  | 80 | 5,244 | 599 | 3,973 | 3,664 | 10,251 | 1,411,482 | 770,335 | 29,014 |
| 30-80 | ALT>40 | 40 | 12,783 | 1,422 | 5,988 | 5,944 | 5,266 | 1,008,396 | 754,832 | 55,215 |
|  |  | 60 | 11,257 | 1,248 | 5,742 | 5,577 | 5,790 | 1,062,341 | 755,979 | 51,998 |
|  |  | 80 | 10,363 | 1,141 | 5,591 | 5,346 | 6,107 | 1,096,049 | 756,771 | 49,994 |
|  | THBs | 20 | 9,047 | 1,144 | 3,935 | 4,309 | 12,223 | 1,711,328 | 768,324 | 52,462 |
|  |  | 40 | 5,230 | 681 | 2,862 | 2,987 | 15,098 | 1,965,869 | 775,875 | 46,258 |
|  |  | 60 | 3,840 | 477 | 2,402 | 2,380 | 16,265 | 2,066,729 | 779,710 | 43,388 |
|  |  | 80 | 3,147 | 368 | 2,154 | 2,044 | 16,887 | 2,120,633 | 781,980 | 41,848 |
|  | ALT>30/19 | 20 | 11,981 | 1,393 | 5,193 | 5,412 | 7,522 | 1,225,099 | 761,887 | 35,657 |
|  |  | 40 | 7,853 | 940 | 4,343 | 4,320 | 9,573 | 1,398,532 | 767,467 | 33,886 |
|  |  | 60 | 6,056 | 712 | 3,926 | 3,752 | 10,534 | 1,476,867 | 770,577 | 32,344 |
|  |  | 80 | 5,075 | 579 | 3,683 | 3,413 | 11,081 | 1,520,987 | 772,528 | 31,369 |
|  | ALT>35/25 | 20 | 12,747 | 1,456 | 5,510 | 5,698 | 6,706 | 1,125,719 | 760,184 | 30,242 |
|  |  | 40 | 8,567 | 1,010 | 4,719 | 4,666 | 8,529 | 1,276,467 | 764,901 | 30,924 |
|  |  | 60 | 6,696 | 780 | 4,323 | 4,119 | 9,399 | 1,345,687 | 767,576 | 29,996 |
|  |  | 80 | 5,660 | 643 | 4,089 | 3,787 | 9,899 | 1,384,929 | 769,273 | 29,277 |
| 40-80 | ALT>40 | 40 | 13,388 | 1,484 | 6,077 | 6,072 | 5,068 | 988,756 | 754,466 | 55,609 |
|  |  | 60 | 12,159 | 1,345 | 5,879 | 5,778 | 5,489 | 1,031,992 | 755,379 | 52,372 |
|  |  | 80 | 11,439 | 1,259 | 5,757 | 5,592 | 5,744 | 1,059,026 | 756,009 | 50,353 |
|  | THBs | 20 | 10,333 | 1,256 | 4,410 | 4,743 | 10,722 | 1,560,854 | 765,607 | 51,831 |
|  |  | 40 | 6,587 | 814 | 3,443 | 3,532 | 13,266 | 1,788,234 | 772,190 | 45,884 |
|  |  | 60 | 5,140 | 612 | 3,017 | 2,962 | 14,323 | 1,881,570 | 775,593 | 43,098 |
|  |  | 80 | 4,390 | 501 | 2,783 | 2,640 | 14,893 | 1,932,510 | 777,634 | 41,592 |
|  | ALT>30/19 | 20 | 12,695 | 1,456 | 5,423 | 5,632 | 6,946 | 1,170,817 | 760,401 | 35,480 |
|  |  | 40 | 8,696 | 1,023 | 4,636 | 4,606 | 8,833 | 1,333,368 | 765,387 | 34,319 |
|  |  | 60 | 6,920 | 801 | 4,244 | 4,067 | 9,727 | 1,408,771 | 768,200 | 32,922 |
|  |  | 80 | 5,938 | 670 | 4,015 | 3,743 | 10,240 | 1,451,941 | 769,982 | 32,007 |
|  | ALT>35/25 | 20 | 13,325 | 1,509 | 5,683 | 5,865 | 6,267 | 1,087,760 | 758,920 | 30,288 |
|  |  | 40 | 9,285 | 1,080 | 4,946 | 4,892 | 7,963 | 1,231,382 | 763,161 | 31,789 |
|  |  | 60 | 7,448 | 857 | 4,573 | 4,370 | 8,782 | 1,299,184 | 765,596 | 31,023 |
|  |  | 80 | 6,421 | 723 | 4,352 | 4,052 | 9,255 | 1,338,286 | 767,155 | 30,365 |

# Table S5. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by 2040.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2040 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 19,456 | 2,783 | 8,930 | 10,521 | 6,500 | 1,275,773 | 916,733 | 0 |
| 18-80 | ALT>40 | 40 | 15,167 | 2,202 | 8,135 | 9,226 | 8,119 | 1,401,175 | 920,708 | 31,546 |
|  |  | 60 | 13,157 | 1,904 | 7,731 | 8,546 | 8,917 | 1,467,322 | 923,116 | 30,007 |
|  |  | 80 | 12,003 | 1,725 | 7,489 | 8,133 | 9,388 | 1,507,902 | 924,718 | 29,069 |
| 18-80 | THBs | 20 | 9,101 | 1,550 | 4,729 | 5,948 | 18,416 | 2,275,761 | 946,895 | 33,153 |
|  |  | 40 | 5,013 | 857 | 3,268 | 3,860 | 21,812 | 2,519,247 | 959,433 | 29,121 |
|  |  | 60 | 3,631 | 587 | 2,690 | 3,004 | 23,119 | 2,614,046 | 965,290 | 27,561 |
|  |  | 80 | 2,957 | 450 | 2,386 | 2,553 | 23,805 | 2,664,752 | 968,629 | 26,764 |
|  | ALT>30/19 | 20 | 13,454 | 2,074 | 6,750 | 8,099 | 11,787 | 1,680,034 | 934,271 | 23,050 |
|  |  | 40 | 8,557 | 1,343 | 5,452 | 6,188 | 14,564 | 1,858,354 | 944,243 | 21,177 |
|  |  | 60 | 6,567 | 1,009 | 4,862 | 5,285 | 15,783 | 1,935,291 | 949,411 | 20,182 |
|  |  | 80 | 5,508 | 821 | 4,531 | 4,769 | 16,459 | 1,977,921 | 952,538 | 19,610 |
|  | ALT>35/25 | 20 | 14,553 | 2,207 | 7,241 | 8,636 | 10,593 | 1,564,930 | 930,941 | 20,351 |
|  |  | 40 | 9,515 | 1,473 | 5,999 | 6,784 | 13,118 | 1,720,897 | 939,624 | 19,445 |
|  |  | 60 | 7,414 | 1,129 | 5,423 | 5,889 | 14,245 | 1,788,753 | 944,201 | 18,675 |
|  |  | 80 | 6,280 | 933 | 5,096 | 5,372 | 14,875 | 1,826,441 | 946,997 | 18,195 |
| 30-80 | ALT>40 | 40 | 15,562 | 2,255 | 8,194 | 9,331 | 7,972 | 1,389,618 | 920,345 | 31,518 |
|  |  | 60 | 13,737 | 1,985 | 7,819 | 8,707 | 8,698 | 1,449,684 | 922,533 | 29,981 |
|  |  | 80 | 12,690 | 1,822 | 7,596 | 8,327 | 9,126 | 1,486,539 | 923,990 | 29,043 |
|  | THBs | 20 | 10,062 | 1,664 | 5,064 | 6,322 | 17,320 | 2,183,023 | 944,430 | 32,756 |
|  |  | 40 | 5,952 | 981 | 3,654 | 4,296 | 20,555 | 2,415,542 | 956,279 | 28,821 |
|  |  | 60 | 4,511 | 709 | 3,089 | 3,453 | 21,816 | 2,507,680 | 961,865 | 27,296 |
|  |  | 80 | 3,792 | 567 | 2,791 | 3,004 | 22,482 | 2,557,442 | 965,071 | 26,515 |
|  | ALT>30/19 | 20 | 14,001 | 2,139 | 6,921 | 8,294 | 11,319 | 1,644,190 | 932,934 | 22,740 |
|  |  | 40 | 9,159 | 1,421 | 5,663 | 6,433 | 13,994 | 1,817,878 | 942,447 | 21,082 |
|  |  | 60 | 7,167 | 1,090 | 5,088 | 5,548 | 15,177 | 1,893,921 | 947,408 | 20,151 |
|  |  | 80 | 6,099 | 903 | 4,764 | 5,041 | 15,835 | 1,936,417 | 950,422 | 19,610 |
|  | ALT>35/25 | 20 | 15,003 | 2,260 | 7,374 | 8,789 | 10,226 | 1,538,920 | 929,788 | 20,155 |
|  |  | 40 | 10,032 | 1,540 | 6,169 | 6,983 | 12,670 | 1,692,152 | 938,094 | 19,492 |
|  |  | 60 | 7,939 | 1,200 | 5,608 | 6,107 | 13,768 | 1,759,880 | 942,499 | 18,788 |
|  |  | 80 | 6,803 | 1,005 | 5,289 | 5,599 | 14,384 | 1,797,848 | 945,203 | 18,338 |
| 40-80 | ALT>40 | 40 | 16,318 | 2,359 | 8,337 | 9,565 | 7,684 | 1,367,076 | 919,611 | 31,719 |
|  |  | 60 | 14,847 | 2,142 | 8,036 | 9,063 | 8,269 | 1,415,289 | 921,357 | 30,171 |
|  |  | 80 | 14,002 | 2,011 | 7,855 | 8,758 | 8,613 | 1,444,886 | 922,519 | 29,227 |
|  | THBs | 20 | 11,829 | 1,876 | 5,794 | 7,116 | 15,282 | 2,012,872 | 939,438 | 32,463 |
|  |  | 40 | 7,678 | 1,210 | 4,494 | 5,221 | 18,215 | 2,225,726 | 949,930 | 28,615 |
|  |  | 60 | 6,127 | 932 | 3,957 | 4,405 | 19,390 | 2,313,317 | 954,993 | 27,118 |
|  |  | 80 | 5,325 | 783 | 3,667 | 3,960 | 20,020 | 2,361,580 | 957,946 | 26,346 |
|  | ALT>30/19 | 20 | 15,000 | 2,257 | 7,290 | 8,705 | 10,460 | 1,580,591 | 930,151 | 22,717 |
|  |  | 40 | 10,256 | 1,564 | 6,112 | 6,941 | 12,950 | 1,746,527 | 938,747 | 21,384 |
|  |  | 60 | 8,261 | 1,239 | 5,566 | 6,091 | 14,066 | 1,821,342 | 943,300 | 20,535 |
|  |  | 80 | 7,177 | 1,053 | 5,255 | 5,600 | 14,692 | 1,863,850 | 946,095 | 20,028 |
|  | ALT>35/25 | 20 | 15,824 | 2,357 | 7,662 | 9,111 | 9,551 | 1,492,390 | 927,449 | 20,214 |
|  |  | 40 | 10,977 | 1,662 | 6,530 | 7,396 | 11,849 | 1,641,254 | 935,003 | 20,004 |
|  |  | 60 | 8,898 | 1,329 | 5,996 | 6,554 | 12,895 | 1,709,131 | 939,071 | 19,399 |
|  |  | 80 | 7,758 | 1,138 | 5,690 | 6,061 | 13,486 | 1,747,861 | 941,593 | 18,989 |

# Table S6. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by 2045.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2045 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 22,260 | 3,843 | 11,265 | 14,545 | 8,928 | 1,584,696 | 1,039,995 | 0 |
| 18-80 | ALT>40 | 40 | 17,273 | 3,017 | 10,144 | 12,575 | 11,053 | 1,719,922 | 1,046,424 | 21,033 |
|  |  | 60 | 15,012 | 2,613 | 9,600 | 11,593 | 12,063 | 1,789,529 | 1,050,164 | 20,142 |
|  |  | 80 | 13,733 | 2,377 | 9,281 | 11,011 | 12,648 | 1,831,740 | 1,052,595 | 19,606 |
| 18-80 | THBs | 20 | 9,618 | 1,954 | 5,549 | 7,566 | 23,533 | 2,626,412 | 1,085,253 | 23,017 |
|  |  | 40 | 5,439 | 1,084 | 3,824 | 4,859 | 27,164 | 2,850,168 | 1,102,058 | 20,390 |
|  |  | 60 | 4,044 | 764 | 3,169 | 3,816 | 28,533 | 2,938,652 | 1,109,550 | 19,466 |
|  |  | 80 | 3,364 | 603 | 2,830 | 3,277 | 29,245 | 2,986,365 | 1,113,742 | 19,006 |
|  | ALT>30/19 | 20 | 14,748 | 2,746 | 8,178 | 10,737 | 15,882 | 2,016,583 | 1,066,622 | 16,220 |
|  |  | 40 | 9,409 | 1,765 | 6,499 | 8,033 | 19,191 | 2,188,335 | 1,080,902 | 14,756 |
|  |  | 60 | 7,311 | 1,341 | 5,773 | 6,831 | 20,590 | 2,261,456 | 1,087,986 | 14,102 |
|  |  | 80 | 6,205 | 1,109 | 5,374 | 6,162 | 21,354 | 2,301,872 | 1,092,185 | 13,742 |
|  | ALT>35/25 | 20 | 16,024 | 2,946 | 8,805 | 11,515 | 14,423 | 1,902,580 | 1,061,600 | 14,713 |
|  |  | 40 | 10,490 | 1,949 | 7,168 | 8,845 | 17,490 | 2,053,207 | 1,074,323 | 13,648 |
|  |  | 60 | 8,263 | 1,508 | 6,447 | 7,633 | 18,806 | 2,117,558 | 1,080,737 | 13,079 |
|  |  | 80 | 7,075 | 1,262 | 6,047 | 6,951 | 19,530 | 2,153,144 | 1,084,574 | 12,751 |
| 30-80 | ALT>40 | 40 | 17,734 | 3,093 | 10,233 | 12,742 | 10,859 | 1,707,435 | 1,045,836 | 21,014 |
|  |  | 60 | 15,681 | 2,726 | 9,732 | 11,844 | 11,778 | 1,770,632 | 1,049,235 | 20,122 |
|  |  | 80 | 14,520 | 2,511 | 9,438 | 11,311 | 12,311 | 1,808,961 | 1,051,445 | 19,586 |
|  | THBs | 20 | 10,791 | 2,129 | 6,025 | 8,161 | 22,191 | 2,529,963 | 1,081,519 | 22,764 |
|  |  | 40 | 6,534 | 1,262 | 4,345 | 5,511 | 25,687 | 2,745,539 | 1,097,495 | 20,188 |
|  |  | 60 | 5,058 | 935 | 3,698 | 4,470 | 27,023 | 2,832,288 | 1,104,700 | 19,281 |
|  |  | 80 | 4,321 | 767 | 3,360 | 3,926 | 27,725 | 2,879,496 | 1,108,761 | 18,829 |
|  | ALT>30/19 | 20 | 15,434 | 2,846 | 8,432 | 11,058 | 15,263 | 1,978,347 | 1,064,558 | 16,026 |
|  |  | 40 | 10,126 | 1,879 | 6,798 | 8,414 | 18,468 | 2,146,998 | 1,078,236 | 14,704 |
|  |  | 60 | 8,012 | 1,457 | 6,086 | 7,230 | 19,833 | 2,219,910 | 1,085,072 | 14,092 |
|  |  | 80 | 6,891 | 1,224 | 5,693 | 6,568 | 20,582 | 2,260,555 | 1,089,141 | 13,752 |
|  | ALT>35/25 | 20 | 16,596 | 3,028 | 9,009 | 11,772 | 13,928 | 1,873,990 | 1,059,830 | 14,585 |
|  |  | 40 | 11,111 | 2,047 | 7,415 | 9,162 | 16,912 | 2,023,297 | 1,072,047 | 13,684 |
|  |  | 60 | 8,881 | 1,609 | 6,710 | 7,970 | 18,201 | 2,088,174 | 1,078,252 | 13,160 |
|  |  | 80 | 7,685 | 1,364 | 6,316 | 7,296 | 18,913 | 2,124,392 | 1,081,980 | 12,854 |
| 40-80 | ALT>40 | 40 | 18,609 | 3,239 | 10,434 | 13,095 | 10,484 | 1,683,231 | 1,044,658 | 21,132 |
|  |  | 60 | 16,952 | 2,944 | 10,030 | 12,371 | 11,224 | 1,733,999 | 1,047,374 | 20,234 |
|  |  | 80 | 16,015 | 2,771 | 9,793 | 11,942 | 11,653 | 1,764,802 | 1,049,140 | 19,694 |
|  | THBs | 20 | 12,946 | 2,452 | 7,013 | 9,366 | 19,693 | 2,352,883 | 1,073,969 | 22,611 |
|  |  | 40 | 8,545 | 1,591 | 5,432 | 6,836 | 22,934 | 2,553,941 | 1,088,310 | 20,061 |
|  |  | 60 | 6,918 | 1,249 | 4,801 | 5,802 | 24,210 | 2,637,847 | 1,094,958 | 19,161 |
|  |  | 80 | 6,078 | 1,067 | 4,465 | 5,248 | 24,891 | 2,684,362 | 1,098,773 | 18,709 |
|  | ALT>30/19 | 20 | 16,684 | 3,029 | 8,952 | 11,699 | 14,125 | 1,910,319 | 1,060,276 | 16,055 |
|  |  | 40 | 11,432 | 2,087 | 7,407 | 9,173 | 17,141 | 2,074,010 | 1,072,749 | 14,939 |
|  |  | 60 | 9,292 | 1,668 | 6,724 | 8,023 | 18,445 | 2,146,942 | 1,079,091 | 14,381 |
|  |  | 80 | 8,141 | 1,435 | 6,343 | 7,374 | 19,166 | 2,188,259 | 1,082,909 | 14,065 |
|  | ALT>35/25 | 20 | 17,642 | 3,179 | 9,427 | 12,286 | 13,018 | 1,822,690 | 1,056,247 | 14,644 |
|  |  | 40 | 12,246 | 2,225 | 7,917 | 9,790 | 15,849 | 1,970,240 | 1,067,457 | 14,039 |
|  |  | 60 | 10,008 | 1,793 | 7,239 | 8,634 | 17,089 | 2,036,464 | 1,073,248 | 13,586 |
|  |  | 80 | 8,796 | 1,550 | 6,859 | 7,976 | 17,780 | 2,074,084 | 1,076,764 | 13,310 |

# Table S7. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by 2050.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2050 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 24,454 | 4,850 | 13,387 | 18,428 | 11,447 | 1,833,135 | 1,132,692 | 0 |
| 18-80 | ALT>40 | 40 | 18,920 | 3,787 | 11,950 | 15,765 | 14,053 | 1,973,513 | 1,141,781 | 15,445 |
|  |  | 60 | 16,470 | 3,286 | 11,275 | 14,487 | 15,258 | 2,044,582 | 1,146,916 | 14,866 |
|  |  | 80 | 15,097 | 2,997 | 10,886 | 13,742 | 15,949 | 2,087,353 | 1,150,199 | 14,521 |
| 18-80 | THBs | 20 | 10,015 | 2,295 | 6,228 | 8,960 | 28,317 | 2,878,614 | 1,193,299 | 17,250 |
|  |  | 40 | 5,798 | 1,287 | 4,301 | 5,746 | 32,127 | 3,089,690 | 1,213,925 | 15,469 |
|  |  | 60 | 4,395 | 928 | 3,589 | 4,554 | 33,542 | 3,174,399 | 1,222,842 | 14,878 |
|  |  | 80 | 3,711 | 750 | 3,223 | 3,946 | 34,276 | 3,220,328 | 1,227,770 | 14,590 |
|  | ALT>30/19 | 20 | 15,667 | 3,343 | 9,384 | 13,112 | 19,960 | 2,274,190 | 1,168,742 | 12,234 |
|  |  | 40 | 10,048 | 2,145 | 7,376 | 9,675 | 23,713 | 2,438,662 | 1,187,202 | 11,109 |
|  |  | 60 | 7,884 | 1,647 | 6,538 | 8,212 | 25,257 | 2,508,420 | 1,196,084 | 10,652 |
|  |  | 80 | 6,751 | 1,378 | 6,083 | 7,411 | 26,093 | 2,546,995 | 1,201,274 | 10,409 |
|  | ALT>35/25 | 20 | 17,065 | 3,606 | 10,129 | 14,119 | 18,272 | 2,163,919 | 1,162,029 | 11,275 |
|  |  | 40 | 11,218 | 2,378 | 8,147 | 10,684 | 21,798 | 2,307,754 | 1,178,754 | 10,304 |
|  |  | 60 | 8,918 | 1,855 | 7,306 | 9,190 | 23,269 | 2,368,806 | 1,186,927 | 9,877 |
|  |  | 80 | 7,699 | 1,569 | 6,845 | 8,365 | 24,071 | 2,402,556 | 1,191,743 | 9,643 |
| 30-80 | ALT>40 | 40 | 19,431 | 3,885 | 12,069 | 15,997 | 13,815 | 1,960,540 | 1,140,948 | 15,432 |
|  |  | 60 | 17,207 | 3,430 | 11,449 | 14,829 | 14,912 | 2,025,059 | 1,145,614 | 14,852 |
|  |  | 80 | 15,961 | 3,167 | 11,092 | 14,149 | 15,540 | 2,063,896 | 1,148,599 | 14,507 |
|  | THBs | 20 | 11,355 | 2,532 | 6,838 | 9,786 | 26,768 | 2,782,026 | 1,188,246 | 17,081 |
|  |  | 40 | 7,013 | 1,518 | 4,946 | 6,611 | 30,471 | 2,986,617 | 1,207,959 | 15,325 |
|  |  | 60 | 5,512 | 1,146 | 4,234 | 5,408 | 31,868 | 3,070,091 | 1,216,594 | 14,743 |
|  |  | 80 | 4,763 | 957 | 3,865 | 4,786 | 32,598 | 3,115,740 | 1,221,407 | 14,458 |
|  | ALT>30/19 | 20 | 16,469 | 3,481 | 9,722 | 13,570 | 19,200 | 2,235,258 | 1,165,899 | 12,110 |
|  |  | 40 | 10,857 | 2,295 | 7,760 | 10,198 | 22,852 | 2,397,803 | 1,183,639 | 11,083 |
|  |  | 60 | 8,667 | 1,796 | 6,935 | 8,749 | 24,367 | 2,467,812 | 1,192,245 | 10,657 |
|  |  | 80 | 7,512 | 1,525 | 6,485 | 7,952 | 25,191 | 2,506,846 | 1,197,298 | 10,428 |
|  | ALT>35/25 | 20 | 17,744 | 3,720 | 10,406 | 14,493 | 17,656 | 2,134,219 | 1,159,597 | 11,190 |
|  |  | 40 | 11,924 | 2,507 | 8,471 | 11,124 | 21,100 | 2,277,861 | 1,175,708 | 10,339 |
|  |  | 60 | 9,609 | 1,986 | 7,644 | 9,650 | 22,549 | 2,339,890 | 1,183,644 | 9,946 |
|  |  | 80 | 8,376 | 1,700 | 7,189 | 8,831 | 23,341 | 2,374,500 | 1,188,344 | 9,728 |
| 40-80 | ALT>40 | 40 | 20,400 | 4,073 | 12,324 | 16,470 | 13,356 | 1,935,476 | 1,139,291 | 15,508 |
|  |  | 60 | 18,604 | 3,706 | 11,824 | 15,529 | 14,241 | 1,987,329 | 1,143,023 | 14,925 |
|  |  | 80 | 17,597 | 3,494 | 11,536 | 14,981 | 14,747 | 2,018,551 | 1,145,412 | 14,577 |
|  | THBs | 20 | 13,816 | 2,968 | 8,073 | 11,415 | 23,882 | 2,604,453 | 1,178,084 | 16,992 |
|  |  | 40 | 9,242 | 1,944 | 6,260 | 8,328 | 27,382 | 2,797,631 | 1,195,990 | 15,237 |
|  |  | 60 | 7,560 | 1,547 | 5,552 | 7,107 | 28,745 | 2,879,176 | 1,204,079 | 14,653 |
|  |  | 80 | 6,693 | 1,338 | 5,177 | 6,459 | 29,469 | 2,924,543 | 1,208,675 | 14,364 |
|  | ALT>30/19 | 20 | 17,933 | 3,732 | 10,395 | 14,463 | 17,799 | 2,165,756 | 1,160,053 | 12,157 |
|  |  | 40 | 12,332 | 2,568 | 8,525 | 11,214 | 21,267 | 2,325,465 | 1,176,350 | 11,277 |
|  |  | 60 | 10,094 | 2,069 | 7,725 | 9,794 | 22,730 | 2,396,322 | 1,184,405 | 10,891 |
|  |  | 80 | 8,900 | 1,794 | 7,285 | 9,005 | 23,532 | 2,436,443 | 1,189,189 | 10,679 |
|  | ALT>35/25 | 20 | 18,983 | 3,929 | 10,958 | 15,222 | 16,520 | 2,080,757 | 1,154,709 | 11,247 |
|  |  | 40 | 13,213 | 2,743 | 9,112 | 11,979 | 19,816 | 2,224,694 | 1,169,596 | 10,610 |
|  |  | 60 | 10,872 | 2,225 | 8,311 | 10,538 | 21,222 | 2,288,887 | 1,177,064 | 10,271 |
|  |  | 80 | 9,613 | 1,938 | 7,867 | 9,732 | 21,998 | 2,325,310 | 1,181,535 | 10,077 |

# Table S8. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2023 by lifetime.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | Lifetime | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 32046 | 9000 | 21332 | 34655 | 20617 | 2,459,898 | 1,358,261 | 0 |
| 18-80 | ALT>40 | 40 | 25783 | 7319 | 18789 | 29644 | 25209 | 2,600,374 | 1,379,859 | 6,504 |
|  |  | 60 | 22959 | 6537 | 17604 | 27288 | 27334 | 2,669,534 | 1,391,125 | 6,379 |
|  |  | 80 | 21360 | 6086 | 16922 | 25927 | 28553 | 2,710,740 | 1,398,028 | 6,308 |
| 18-80 | THBs | 20 | 11231 | 2822 | 7513 | 11853 | 47474 | 3,419,246 | 1,482,931 | 7,695 |
|  |  | 40 | 6944 | 1615 | 5546 | 7931 | 51074 | 3,613,112 | 1,515,984 | 7,312 |
|  |  | 60 | 5537 | 1193 | 4856 | 6552 | 52350 | 3,692,948 | 1,529,360 | 7,207 |
|  |  | 80 | 4980 | 981 | 4507 | 5855 | 53000 | 3,736,587 | 1,536,561 | 7,160 |
|  | ALT>30/19 | 20 | 16719 | 4958 | 11766 | 19325 | 37512 | 2,868,402 | 1,435,460 | 5,292 |
|  |  | 40 | 10888 | 3217 | 9017 | 13860 | 42384 | 3,012,685 | 1,469,644 | 4,963 |
|  |  | 60 | 8660 | 2535 | 7949 | 11711 | 44280 | 3,074,949 | 1,484,914 | 4,856 |
|  |  | 80 | 7486 | 2172 | 7383 | 10566 | 45286 | 3,109,717 | 1,493,549 | 4,803 |
|  | ALT>35/25 | 20 | 18408 | 5431 | 13302 | 21550 | 34564 | 2,773,772 | 1,422,113 | 4,916 |
|  |  | 40 | 12329 | 3632 | 10551 | 16004 | 39285 | 2,897,505 | 1,454,411 | 4,551 |
|  |  | 60 | 9973 | 2915 | 9465 | 13788 | 41150 | 2,950,953 | 1,469,022 | 4,433 |
|  |  | 80 | 8722 | 2531 | 8885 | 12599 | 42147 | 2,980,815 | 1,477,340 | 4,375 |
| 30-80 | ALT>40 | 40 | 26416 | 7506 | 19071 | 30217 | 24703 | 2,587,653 | 1,377,528 | 6,631 |
|  |  | 60 | 23871 | 6807 | 18013 | 28121 | 26601 | 2,650,567 | 1,387,604 | 6,498 |
|  |  | 80 | 22427 | 6404 | 17402 | 26907 | 27692 | 2,688,055 | 1,393,785 | 6,423 |
|  | THBs | 20 | 12509 | 3504 | 8881 | 14286 | 44784 | 3,333,572 | 1,470,654 | 7,773 |
|  |  | 40 | 8434 | 2224 | 6799 | 10149 | 48558 | 3,522,459 | 1,502,976 | 7,342 |
|  |  | 60 | 6967 | 1758 | 6040 | 8634 | 49946 | 3,601,258 | 1,516,325 | 7,221 |
|  |  | 80 | 5914 | 1518 | 5648 | 7851 | 50665 | 3,644,638 | 1,523,597 | 7,166 |
|  | ALT>30/19 | 20 | 18266 | 5410 | 12713 | 20970 | 35769 | 2,834,196 | 1,428,032 | 5,365 |
|  |  | 40 | 12349 | 3658 | 9938 | 15474 | 40668 | 2,978,486 | 1,461,261 | 5,035 |
|  |  | 60 | 10050 | 2959 | 8839 | 13272 | 42608 | 3,041,495 | 1,476,279 | 4,928 |
|  |  | 80 | 8830 | 2584 | 8252 | 12089 | 43647 | 3,076,909 | 1,484,825 | 4,875 |
|  | ALT>35/25 | 20 | 19797 | 5835 | 14126 | 22995 | 33090 | 2,746,974 | 1,415,737 | 4,995 |
|  |  | 40 | 13656 | 4031 | 11356 | 17436 | 37843 | 2,872,417 | 1,447,172 | 4,640 |
|  |  | 60 | 11240 | 3302 | 10244 | 15178 | 39752 | 2,927,337 | 1,461,554 | 4,525 |
|  |  | 80 | 9950 | 2908 | 9646 | 13957 | 40780 | 2,958,248 | 1,469,793 | 4,468 |
| 40-80 | ALT>40 | 40 | 27561 | 7827 | 19557 | 31187 | 23832 | 2,562,828 | 1,373,354 | 6,820 |
|  |  | 60 | 25526 | 7275 | 18722 | 29540 | 25332 | 2,613,533 | 1,381,271 | 6,677 |
|  |  | 80 | 24370 | 6957 | 18240 | 28584 | 26196 | 2,643,748 | 1,386,135 | 6,596 |
|  | THBs | 20 | 15562 | 4651 | 11367 | 18494 | 39979 | 3,173,066 | 1,448,196 | 7,930 |
|  |  | 40 | 11003 | 3266 | 9132 | 14075 | 43995 | 3,353,452 | 1,478,885 | 7,408 |
|  |  | 60 | 9255 | 2728 | 8263 | 12349 | 45560 | 3,430,776 | 1,492,080 | 7,255 |
|  |  | 80 | 8330 | 2441 | 7800 | 11428 | 46395 | 3,473,963 | 1,499,433 | 7,183 |
|  | ALT>30/19 | 20 | 20973 | 6157 | 14421 | 23778 | 32755 | 2,771,235 | 1,414,401 | 5,546 |
|  |  | 40 | 14941 | 4402 | 11646 | 18305 | 37650 | 2,916,210 | 1,445,681 | 5,220 |
|  |  | 60 | 12525 | 3679 | 10510 | 16040 | 39650 | 2,981,007 | 1,460,152 | 5,114 |
|  |  | 80 | 11225 | 3286 | 9893 | 14805 | 40736 | 3,017,876 | 1,468,494 | 5,062 |
|  | ALT>35/25 | 20 | 22223 | 6500 | 15583 | 25429 | 30563 | 2,697,218 | 1,404,234 | 5,162 |
|  |  | 40 | 16010 | 4704 | 12821 | 19917 | 35331 | 2,826,455 | 1,433,943 | 4,843 |
|  |  | 60 | 13499 | 3957 | 11678 | 17611 | 37302 | 2,884,484 | 1,447,840 | 4,740 |
|  |  | 80 | 12141 | 3548 | 11054 | 16346 | 38378 | 2,917,582 | 1,455,896 | 4,688 |

# Table S9. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2028 by 2035.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2035 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 15,873 | 1,736 | 6,441 | 6,591 | 4,260 | 909,914 | 753,048 | 0 |
| 18-80 | ALT>40 | 40 | 14,115 | 1,622 | 6,267 | 6,390 | 4,736 | 956,119 | 753,351 | 152,368 |
|  |  | 60 | 13,164 | 1,552 | 6,163 | 6,261 | 5,007 | 983,343 | 753,568 | 141,058 |
|  |  | 80 | 12,586 | 1,505 | 6,095 | 6,173 | 5,178 | 1,000,972 | 753,729 | 133,627 |
| 18-80 | THBs | 20 | 12,751 | 1,567 | 5,328 | 5,827 | 8,166 | 1,344,034 | 758,979 | 73,200 |
|  |  | 40 | 10,257 | 1,386 | 4,785 | 5,328 | 9,993 | 1,523,284 | 761,287 | 74,442 |
|  |  | 60 | 9,236 | 1,289 | 4,520 | 5,053 | 10,815 | 1,598,273 | 762,631 | 71,829 |
|  |  | 80 | 8,724 | 1,233 | 4,370 | 4,888 | 11,258 | 1,637,669 | 763,477 | 69,782 |
|  | ALT>30/19 | 20 | 13,996 | 1,629 | 5,823 | 6,137 | 5,894 | 1,084,105 | 757,294 | 41,025 |
|  |  | 40 | 11,577 | 1,463 | 5,444 | 5,764 | 7,003 | 1,188,918 | 758,797 | 48,530 |
|  |  | 60 | 10,415 | 1,366 | 5,235 | 5,541 | 7,575 | 1,239,290 | 759,735 | 49,253 |
|  |  | 80 | 9,764 | 1,305 | 5,108 | 5,397 | 7,912 | 1,267,938 | 760,359 | 48,967 |
|  | ALT>35/25 | 20 | 14,324 | 1,643 | 5,971 | 6,241 | 5,622 | 1,037,180 | 757,278 | 30,087 |
|  |  | 40 | 11,850 | 1,474 | 5,608 | 5,878 | 6,635 | 1,130,643 | 758,591 | 39,819 |
|  |  | 60 | 10,641 | 1,375 | 5,406 | 5,658 | 7,164 | 1,176,222 | 759,419 | 41,798 |
|  |  | 80 | 9,956 | 1,312 | 5,281 | 5,515 | 7,477 | 1,202,347 | 759,974 | 42,219 |
| 30-80 | ALT>40 | 40 | 14,278 | 1,633 | 6,277 | 6,404 | 4,692 | 951,849 | 753,323 | 152,387 |
|  |  | 60 | 13,415 | 1,569 | 6,179 | 6,284 | 4,938 | 976,562 | 753,520 | 141,111 |
|  |  | 80 | 12,889 | 1,526 | 6,115 | 6,203 | 5,094 | 992,568 | 753,666 | 133,677 |
|  | THBs | 20 | 13,048 | 1,584 | 5,410 | 5,884 | 7,805 | 1,303,845 | 758,502 | 72,228 |
|  |  | 40 | 10,621 | 1,409 | 4,895 | 5,408 | 9,508 | 1,470,713 | 760,645 | 73,822 |
|  |  | 60 | 9,606 | 1,315 | 4,642 | 5,144 | 10,279 | 1,541,246 | 761,896 | 71,354 |
|  |  | 80 | 9,087 | 1,259 | 4,499 | 4,985 | 10,697 | 1,578,608 | 762,686 | 69,381 |
|  | ALT>30/19 | 20 | 14,176 | 1,640 | 5,867 | 6,170 | 5,746 | 1,068,529 | 756,968 | 40,463 |
|  |  | 40 | 11,817 | 1,478 | 5,504 | 5,811 | 6,798 | 1,168,036 | 758,377 | 48,438 |
|  |  | 60 | 10,673 | 1,384 | 5,303 | 5,595 | 7,344 | 1,216,307 | 759,259 | 49,330 |
|  |  | 80 | 10,030 | 1,324 | 5,181 | 5,456 | 7,666 | 1,243,955 | 759,847 | 49,127 |
|  | ALT>35/25 | 20 | 14,473 | 1,653 | 6,002 | 6,266 | 5,498 | 1,025,686 | 756,929 | 29,828 |
|  |  | 40 | 12,063 | 1,489 | 5,654 | 5,916 | 6,462 | 1,114,825 | 758,159 | 40,089 |
|  |  | 60 | 10,878 | 1,392 | 5,460 | 5,703 | 6,968 | 1,158,721 | 758,937 | 42,246 |
|  |  | 80 | 10,203 | 1,331 | 5,340 | 5,565 | 7,268 | 1,184,064 | 759,460 | 42,752 |
| 40-80 | ALT>40 | 40 | 14,580 | 1,652 | 6,308 | 6,440 | 4,610 | 943,836 | 753,270 | 152,675 |
|  |  | 60 | 13,880 | 1,600 | 6,229 | 6,343 | 4,810 | 963,835 | 753,429 | 141,386 |
|  |  | 80 | 13,454 | 1,566 | 6,177 | 6,277 | 4,936 | 976,790 | 753,547 | 133,937 |
|  | THBs | 20 | 13,598 | 1,616 | 5,615 | 6,031 | 7,135 | 1,230,279 | 757,487 | 72,171 |
|  |  | 40 | 11,295 | 1,452 | 5,164 | 5,606 | 8,606 | 1,374,310 | 759,294 | 74,348 |
|  |  | 60 | 10,290 | 1,362 | 4,938 | 5,367 | 9,283 | 1,436,646 | 760,359 | 72,049 |
|  |  | 80 | 9,760 | 1,308 | 4,809 | 5,221 | 9,655 | 1,470,271 | 761,036 | 70,148 |
|  | ALT>30/19 | 20 | 14,510 | 1,661 | 5,985 | 6,262 | 5,473 | 1,040,945 | 756,249 | 40,931 |
|  |  | 40 | 12,261 | 1,508 | 5,656 | 5,932 | 6,421 | 1,130,876 | 757,464 | 50,037 |
|  |  | 60 | 11,153 | 1,418 | 5,473 | 5,731 | 6,916 | 1,175,378 | 758,230 | 51,224 |
|  |  | 80 | 10,521 | 1,361 | 5,360 | 5,601 | 7,211 | 1,201,241 | 758,745 | 51,138 |
|  | ALT>35/25 | 20 | 14,749 | 1,671 | 6,090 | 6,335 | 5,269 | 1,005,127 | 756,196 | 30,240 |
|  |  | 40 | 12,460 | 1,516 | 5,775 | 6,013 | 6,143 | 1,086,402 | 757,259 | 41,909 |
|  |  | 60 | 11,317 | 1,424 | 5,597 | 5,815 | 6,606 | 1,127,256 | 757,937 | 44,459 |
|  |  | 80 | 10,660 | 1,366 | 5,486 | 5,686 | 6,882 | 1,151,199 | 758,395 | 45,125 |

# Table S10. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2028 by 2040.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2040 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 19,456 | 2,783 | 8,930 | 10,521 | 6,500 | 1,275,773 | 916,733 | 0 |
| 18-80 | ALT>40 | 40 | 16,865 | 2,518 | 8,553 | 9,979 | 7,346 | 1,339,308 | 917,736 | 63,344 |
|  |  | 60 | 15,589 | 2,372 | 8,350 | 9,672 | 7,786 | 1,374,204 | 918,385 | 59,571 |
|  |  | 80 | 14,843 | 2,281 | 8,224 | 9,478 | 8,051 | 1,396,036 | 918,835 | 57,212 |
| 18-80 | THBs | 20 | 13,913 | 2,304 | 6,796 | 8,588 | 13,054 | 1,863,005 | 930,012 | 44,223 |
|  |  | 40 | 10,938 | 1,935 | 5,938 | 7,529 | 15,324 | 2,031,610 | 934,920 | 41,558 |
|  |  | 60 | 9,875 | 1,775 | 5,571 | 7,045 | 16,235 | 2,096,990 | 937,388 | 39,759 |
|  |  | 80 | 9,351 | 1,689 | 5,374 | 6,778 | 16,716 | 2,131,608 | 938,836 | 38,719 |
|  | ALT>30/19 | 20 | 16,142 | 2,492 | 7,742 | 9,416 | 9,461 | 1,518,566 | 925,614 | 27,338 |
|  |  | 40 | 12,916 | 2,130 | 7,042 | 8,522 | 11,133 | 1,632,598 | 929,168 | 28,695 |
|  |  | 60 | 11,538 | 1,951 | 6,702 | 8,062 | 11,909 | 1,683,106 | 931,133 | 28,285 |
|  |  | 80 | 10,794 | 1,846 | 6,505 | 7,789 | 12,348 | 1,711,258 | 932,360 | 27,867 |
|  | ALT>35/25 | 20 | 16,650 | 2,537 | 7,973 | 9,633 | 8,995 | 1,463,278 | 925,100 | 22,408 |
|  |  | 40 | 13,316 | 2,167 | 7,286 | 8,745 | 10,556 | 1,566,927 | 928,303 | 25,163 |
|  |  | 60 | 11,866 | 1,981 | 6,948 | 8,281 | 11,289 | 1,613,275 | 930,096 | 25,255 |
|  |  | 80 | 11,076 | 1,871 | 6,750 | 8,004 | 11,706 | 1,639,196 | 931,223 | 25,079 |
| 30-80 | ALT>40 | 40 | 17,105 | 2,543 | 8,582 | 10,023 | 7,269 | 1,333,418 | 917,643 | 63,346 |
|  |  | 60 | 15,947 | 2,410 | 8,394 | 9,742 | 7,668 | 1,365,087 | 918,232 | 59,572 |
|  |  | 80 | 15,270 | 2,327 | 8,278 | 9,564 | 7,909 | 1,384,903 | 918,640 | 57,213 |
|  | THBs | 20 | 14,434 | 2,350 | 6,972 | 8,750 | 12,449 | 1,808,534 | 928,935 | 43,661 |
|  |  | 40 | 11,494 | 1,991 | 6,152 | 7,732 | 14,587 | 1,967,330 | 933,523 | 41,188 |
|  |  | 60 | 10,410 | 1,831 | 5,799 | 7,262 | 15,455 | 2,029,859 | 935,844 | 39,457 |
|  |  | 80 | 9,865 | 1,745 | 5,607 | 7,000 | 15,917 | 2,063,279 | 937,214 | 38,450 |
|  | ALT>30/19 | 20 | 16,454 | 2,521 | 7,839 | 9,508 | 9,192 | 1,496,750 | 924,930 | 26,957 |
|  |  | 40 | 13,286 | 2,167 | 7,165 | 8,643 | 10,790 | 1,606,185 | 928,284 | 28,603 |
|  |  | 60 | 11,916 | 1,991 | 6,836 | 8,196 | 11,536 | 1,655,275 | 930,148 | 28,288 |
|  |  | 80 | 11,172 | 1,887 | 6,645 | 7,929 | 11,959 | 1,682,855 | 931,316 | 27,915 |
|  | ALT>35/25 | 20 | 16,914 | 2,561 | 8,049 | 9,706 | 8,767 | 1,446,248 | 924,413 | 22,197 |
|  |  | 40 | 13,648 | 2,201 | 7,388 | 8,846 | 10,264 | 1,546,203 | 927,435 | 25,268 |
|  |  | 60 | 12,214 | 2,018 | 7,061 | 8,396 | 10,970 | 1,591,495 | 929,135 | 25,456 |
|  |  | 80 | 11,428 | 1,910 | 6,870 | 8,126 | 11,373 | 1,617,038 | 930,208 | 25,325 |
| 40-80 | ALT>40 | 40 | 17,549 | 2,588 | 8,648 | 10,118 | 7,123 | 1,322,435 | 917,468 | 63,453 |
|  |  | 60 | 16,609 | 2,481 | 8,495 | 9,889 | 7,447 | 1,348,077 | 917,944 | 59,672 |
|  |  | 80 | 16,059 | 2,414 | 8,401 | 9,745 | 7,643 | 1,364,124 | 918,274 | 57,308 |
|  | THBs | 20 | 15,395 | 2,435 | 7,352 | 9,099 | 11,325 | 1,709,088 | 926,643 | 43,724 |
|  |  | 40 | 12,519 | 2,093 | 6,615 | 8,170 | 13,220 | 1,849,839 | 930,576 | 41,467 |
|  |  | 60 | 11,398 | 1,936 | 6,289 | 7,730 | 14,007 | 1,907,133 | 932,597 | 39,797 |
|  |  | 80 | 10,815 | 1,849 | 6,110 | 7,481 | 14,432 | 1,938,356 | 933,804 | 38,813 |
|  | ALT>30/19 | 20 | 17,028 | 2,573 | 8,053 | 9,712 | 8,696 | 1,458,185 | 923,413 | 27,306 |
|  |  | 40 | 13,966 | 2,236 | 7,433 | 8,906 | 10,157 | 1,559,377 | 926,350 | 29,488 |
|  |  | 60 | 12,615 | 2,065 | 7,127 | 8,484 | 10,847 | 1,605,955 | 928,002 | 29,300 |
|  |  | 80 | 11,870 | 1,964 | 6,948 | 8,231 | 11,241 | 1,632,540 | 929,045 | 28,977 |
|  | ALT>35/25 | 20 | 17,401 | 2,606 | 8,220 | 9,868 | 8,347 | 1,415,795 | 922,960 | 22,485 |
|  |  | 40 | 14,260 | 2,263 | 7,612 | 9,067 | 9,723 | 1,509,086 | 925,615 | 26,266 |
|  |  | 60 | 12,856 | 2,087 | 7,308 | 8,644 | 10,380 | 1,552,504 | 927,126 | 26,625 |
|  |  | 80 | 12,077 | 1,982 | 7,129 | 8,388 | 10,758 | 1,577,395 | 928,088 | 26,563 |

# Table S11. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2028 by 2045.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2045 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 22,260 | 3,843 | 11,265 | 14,545 | 8,928 | 1,584,696 | 1,039,995 | 0 |
| 18-80 | ALT>40 | 40 | 19,010 | 3,399 | 10,652 | 13,549 | 10,160 | 1,659,278 | 1,042,087 | 35,648 |
|  |  | 60 | 17,489 | 3,172 | 10,342 | 13,027 | 10,767 | 1,698,636 | 1,043,361 | 33,846 |
|  |  | 80 | 16,616 | 3,036 | 10,156 | 12,711 | 11,125 | 1,722,781 | 1,044,212 | 32,745 |
| 18-80 | THBs | 20 | 14,604 | 2,934 | 7,990 | 11,027 | 17,863 | 2,242,938 | 1,062,536 | 29,201 |
|  |  | 40 | 11,456 | 2,398 | 6,875 | 9,421 | 20,393 | 2,394,934 | 1,070,171 | 26,851 |
|  |  | 60 | 10,376 | 2,187 | 6,431 | 8,759 | 21,367 | 2,454,034 | 1,073,722 | 25,776 |
|  |  | 80 | 9,844 | 2,078 | 6,198 | 8,407 | 21,878 | 2,485,671 | 1,075,740 | 25,205 |
|  | ALT>30/19 | 20 | 17,604 | 3,294 | 9,394 | 12,516 | 13,268 | 1,864,592 | 1,054,691 | 19,045 |
|  |  | 40 | 13,876 | 2,729 | 8,378 | 11,020 | 15,416 | 1,977,571 | 1,060,716 | 18,960 |
|  |  | 60 | 12,370 | 2,473 | 7,918 | 10,318 | 16,356 | 2,026,056 | 1,063,829 | 18,518 |
|  |  | 80 | 11,571 | 2,329 | 7,661 | 9,917 | 16,877 | 2,052,867 | 1,065,709 | 18,207 |
|  | ALT>35/25 | 20 | 18,240 | 3,376 | 9,705 | 12,864 | 12,616 | 1,808,095 | 1,053,470 | 16,579 |
|  |  | 40 | 14,366 | 2,794 | 8,693 | 11,358 | 14,651 | 1,911,362 | 1,059,021 | 17,169 |
|  |  | 60 | 12,776 | 2,526 | 8,230 | 10,641 | 15,550 | 1,955,893 | 1,061,926 | 16,926 |
|  |  | 80 | 11,924 | 2,375 | 7,969 | 10,229 | 16,051 | 1,980,547 | 1,063,692 | 16,705 |
| 30-80 | ALT>40 | 40 | 19,311 | 3,440 | 10,703 | 13,635 | 10,047 | 1,652,353 | 1,041,893 | 35,644 |
|  |  | 60 | 17,931 | 3,234 | 10,418 | 13,159 | 10,599 | 1,688,065 | 1,043,049 | 33,842 |
|  |  | 80 | 17,139 | 3,111 | 10,247 | 12,869 | 10,923 | 1,709,977 | 1,043,821 | 32,740 |
|  | THBs | 20 | 15,321 | 3,020 | 8,273 | 11,335 | 17,038 | 2,181,981 | 1,060,678 | 28,878 |
|  |  | 40 | 12,162 | 2,493 | 7,198 | 9,780 | 19,449 | 2,326,763 | 1,067,860 | 26,630 |
|  |  | 60 | 11,041 | 2,280 | 6,764 | 9,127 | 20,389 | 2,384,023 | 1,071,231 | 25,590 |
|  |  | 80 | 10,477 | 2,168 | 6,534 | 8,778 | 20,886 | 2,414,962 | 1,073,159 | 25,035 |
|  | ALT>30/19 | 20 | 18,039 | 3,346 | 9,554 | 12,693 | 12,874 | 1,839,500 | 1,053,537 | 18,815 |
|  |  | 40 | 14,355 | 2,793 | 8,571 | 11,240 | 14,939 | 1,949,005 | 1,059,252 | 18,918 |
|  |  | 60 | 12,847 | 2,539 | 8,124 | 10,552 | 15,849 | 1,996,678 | 1,062,224 | 18,533 |
|  |  | 80 | 12,041 | 2,396 | 7,872 | 10,159 | 16,355 | 2,023,260 | 1,064,026 | 18,250 |
|  | ALT>35/25 | 20 | 18,616 | 3,420 | 9,837 | 13,009 | 12,279 | 1,787,823 | 1,052,351 | 16,439 |
|  |  | 40 | 14,799 | 2,851 | 8,860 | 11,548 | 14,241 | 1,888,459 | 1,057,618 | 17,237 |
|  |  | 60 | 13,215 | 2,587 | 8,410 | 10,847 | 15,114 | 1,932,521 | 1,060,390 | 17,054 |
|  |  | 80 | 12,361 | 2,437 | 8,155 | 10,444 | 15,602 | 1,957,132 | 1,062,083 | 16,861 |
| 40-80 | ALT>40 | 40 | 19,867 | 3,516 | 10,809 | 13,807 | 9,836 | 1,639,480 | 1,041,530 | 35,696 |
|  |  | 60 | 18,746 | 3,349 | 10,578 | 13,421 | 10,283 | 1,668,403 | 1,042,465 | 33,891 |
|  |  | 80 | 18,104 | 3,249 | 10,439 | 13,186 | 10,547 | 1,686,152 | 1,043,089 | 32,788 |
|  | THBs | 20 | 16,641 | 3,179 | 8,848 | 11,957 | 15,507 | 2,070,582 | 1,056,775 | 28,957 |
|  |  | 40 | 13,463 | 2,667 | 7,859 | 10,506 | 17,696 | 2,202,060 | 1,063,028 | 26,804 |
|  |  | 60 | 12,266 | 2,451 | 7,448 | 9,877 | 18,573 | 2,255,929 | 1,066,024 | 25,788 |
|  |  | 80 | 11,644 | 2,335 | 7,226 | 9,534 | 19,043 | 2,285,581 | 1,067,763 | 25,240 |
|  | ALT>30/19 | 20 | 18,838 | 3,443 | 9,884 | 13,055 | 12,144 | 1,794,958 | 1,051,017 | 19,077 |
|  |  | 40 | 15,235 | 2,909 | 8,969 | 11,685 | 14,057 | 1,898,237 | 1,056,086 | 19,486 |
|  |  | 60 | 13,725 | 2,660 | 8,547 | 11,028 | 14,912 | 1,944,492 | 1,058,759 | 19,174 |
|  |  | 80 | 12,907 | 2,519 | 8,307 | 10,649 | 15,390 | 1,970,697 | 1,060,396 | 18,921 |
|  | ALT>35/25 | 20 | 19,308 | 3,502 | 10,111 | 13,308 | 11,656 | 1,751,434 | 1,050,011 | 16,647 |
|  |  | 40 | 15,596 | 2,957 | 9,201 | 11,932 | 13,482 | 1,847,339 | 1,054,698 | 17,863 |
|  |  | 60 | 14,024 | 2,699 | 8,777 | 11,265 | 14,307 | 1,890,593 | 1,057,200 | 17,779 |
|  |  | 80 | 13,167 | 2,552 | 8,534 | 10,877 | 14,770 | 1,915,161 | 1,058,743 | 17,627 |

# Table S12. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2028 by 2050.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2050 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 24,454 | 4,850 | 13,387 | 18,428 | 11,447 | 1,833,135 | 1,132,692 | 0 |
| 18-80 | ALT>40 | 40 | 20,685 | 4,222 | 12,530 | 16,924 | 13,059 | 1,914,196 | 1,136,145 | 23,476 |
|  |  | 60 | 18,978 | 3,916 | 12,114 | 16,175 | 13,825 | 1,955,865 | 1,138,163 | 22,434 |
|  |  | 80 | 18,012 | 3,737 | 11,871 | 15,731 | 14,268 | 1,981,108 | 1,139,478 | 21,806 |
| 18-80 | THBs | 20 | 15,084 | 3,456 | 8,956 | 13,099 | 22,440 | 2,514,615 | 1,165,376 | 20,850 |
|  |  | 40 | 11,870 | 2,784 | 7,640 | 11,022 | 25,151 | 2,654,282 | 1,175,592 | 19,141 |
|  |  | 60 | 10,780 | 2,534 | 7,138 | 10,215 | 26,173 | 2,709,523 | 1,180,125 | 18,476 |
|  |  | 80 | 10,244 | 2,407 | 6,878 | 9,795 | 26,706 | 2,739,337 | 1,182,653 | 18,138 |
|  | ALT>30/19 | 20 | 18,626 | 4,001 | 10,781 | 15,294 | 17,130 | 2,129,388 | 1,153,810 | 14,028 |
|  |  | 40 | 14,582 | 3,249 | 9,479 | 13,200 | 19,675 | 2,238,088 | 1,162,434 | 13,615 |
|  |  | 60 | 13,000 | 2,926 | 8,918 | 12,273 | 20,748 | 2,284,138 | 1,166,700 | 13,262 |
|  |  | 80 | 12,168 | 2,749 | 8,610 | 11,758 | 21,334 | 2,309,541 | 1,169,223 | 13,041 |
|  | ALT>35/25 | 20 | 19,354 | 4,119 | 11,164 | 15,773 | 16,304 | 2,074,677 | 1,151,781 | 12,654 |
|  |  | 40 | 15,140 | 3,342 | 9,856 | 13,647 | 18,739 | 2,173,906 | 1,159,857 | 12,544 |
|  |  | 60 | 13,466 | 3,003 | 9,286 | 12,694 | 19,776 | 2,216,021 | 1,163,900 | 12,269 |
|  |  | 80 | 12,579 | 2,815 | 8,971 | 12,160 | 20,345 | 2,239,257 | 1,166,307 | 12,081 |
| 30-80 | ALT>40 | 40 | 21,034 | 4,281 | 12,603 | 17,057 | 12,911 | 1,906,664 | 1,135,824 | 23,475 |
|  |  | 60 | 19,485 | 4,003 | 12,222 | 16,374 | 13,606 | 1,944,470 | 1,137,655 | 22,431 |
|  |  | 80 | 18,609 | 3,840 | 12,000 | 15,970 | 14,010 | 1,967,377 | 1,138,849 | 21,803 |
|  | THBs | 20 | 15,960 | 3,587 | 9,346 | 13,576 | 21,424 | 2,451,652 | 1,162,638 | 20,654 |
|  |  | 40 | 12,693 | 2,919 | 8,067 | 11,545 | 24,035 | 2,585,883 | 1,172,305 | 19,003 |
|  |  | 60 | 11,546 | 2,664 | 7,570 | 10,741 | 25,035 | 2,639,871 | 1,176,643 | 18,355 |
|  |  | 80 | 10,969 | 2,532 | 7,310 | 10,318 | 25,560 | 2,669,264 | 1,179,080 | 18,025 |
|  | ALT>30/19 | 20 | 19,169 | 4,081 | 11,009 | 15,573 | 16,613 | 2,102,924 | 1,152,117 | 13,889 |
|  |  | 40 | 15,150 | 3,340 | 9,744 | 13,530 | 19,073 | 2,209,162 | 1,160,331 | 13,605 |
|  |  | 60 | 13,556 | 3,019 | 9,196 | 12,618 | 20,119 | 2,254,850 | 1,164,425 | 13,290 |
|  |  | 80 | 12,712 | 2,842 | 8,892 | 12,109 | 20,692 | 2,280,262 | 1,166,857 | 13,087 |
|  | ALT>35/25 | 20 | 19,829 | 4,188 | 11,357 | 16,009 | 15,860 | 2,052,808 | 1,150,176 | 12,564 |
|  |  | 40 | 15,656 | 3,424 | 10,089 | 13,938 | 18,220 | 2,150,394 | 1,157,870 | 12,601 |
|  |  | 60 | 13,979 | 3,088 | 9,532 | 13,002 | 19,232 | 2,192,486 | 1,161,749 | 12,367 |
|  |  | 80 | 13,085 | 2,902 | 9,223 | 12,476 | 19,790 | 2,215,917 | 1,164,069 | 12,199 |
| 40-80 | ALT>40 | 40 | 21,678 | 4,388 | 12,751 | 17,316 | 12,635 | 1,892,684 | 1,135,225 | 23,505 |
|  |  | 60 | 20,420 | 4,163 | 12,442 | 16,762 | 13,199 | 1,923,306 | 1,136,706 | 22,461 |
|  |  | 80 | 19,709 | 4,030 | 12,261 | 16,434 | 13,527 | 1,941,863 | 1,137,672 | 21,832 |
|  | THBs | 20 | 17,571 | 3,829 | 10,119 | 14,508 | 19,540 | 2,336,397 | 1,156,971 | 20,728 |
|  |  | 40 | 14,209 | 3,169 | 8,918 | 12,575 | 21,963 | 2,460,552 | 1,165,505 | 19,121 |
|  |  | 60 | 12,956 | 2,903 | 8,437 | 11,780 | 22,918 | 2,512,210 | 1,169,431 | 18,484 |
|  |  | 80 | 12,306 | 2,762 | 8,179 | 11,353 | 23,427 | 2,540,820 | 1,171,674 | 18,154 |
|  | ALT>30/19 | 20 | 20,166 | 4,228 | 11,463 | 16,122 | 15,654 | 2,055,738 | 1,148,488 | 14,092 |
|  |  | 40 | 16,193 | 3,509 | 10,274 | 14,178 | 17,959 | 2,157,561 | 1,155,850 | 14,009 |
|  |  | 60 | 14,579 | 3,190 | 9,749 | 13,296 | 18,953 | 2,202,635 | 1,159,578 | 13,743 |
|  |  | 80 | 13,713 | 3,012 | 9,457 | 12,799 | 19,503 | 2,228,097 | 1,161,817 | 13,561 |
|  | ALT>35/25 | 20 | 20,703 | 4,315 | 11,744 | 16,473 | 15,037 | 2,013,403 | 1,146,861 | 12,722 |
|  |  | 40 | 16,605 | 3,577 | 10,552 | 14,507 | 17,258 | 2,108,044 | 1,153,780 | 13,036 |
|  |  | 60 | 14,923 | 3,246 | 10,021 | 13,606 | 18,225 | 2,150,134 | 1,157,323 | 12,870 |
|  |  | 80 | 14,015 | 3,061 | 9,724 | 13,095 | 18,762 | 2,173,953 | 1,159,463 | 12,731 |

# Table S13. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2028 by lifetime.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | Lifetime | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 32046 | 9000 | 21332 | 34655 | 20617 | 2,459,898 | 1,358,261 | 0 |
| 18-80 | ALT>40 | 40 | 27489 | 7838 | 19576 | 31248 | 23821 | 2,544,704 | 1,369,509 | 7,540 |
|  |  | 60 | 25409 | 7289 | 18744 | 29621 | 25324 | 2,586,236 | 1,375,433 | 7,357 |
|  |  | 80 | 24224 | 6970 | 18262 | 28673 | 26192 | 2,610,907 | 1,379,081 | 7,253 |
| 18-80 | THBs | 20 | 16020 | 4371 | 10258 | 17094 | 42200 | 3,084,154 | 1,438,147 | 7,814 |
|  |  | 40 | 13232 | 3471 | 8756 | 14159 | 44957 | 3,205,347 | 1,457,380 | 7,521 |
|  |  | 60 | 12248 | 3159 | 8231 | 13132 | 45931 | 3,255,256 | 1,465,158 | 7,440 |
|  |  | 80 | 11757 | 3003 | 7967 | 12615 | 46427 | 3,282,555 | 1,469,337 | 7,406 |
|  | ALT>30/19 | 20 | 19916 | 5951 | 13464 | 22608 | 34398 | 2,737,024 | 1,410,390 | 5,316 |
|  |  | 40 | 15478 | 4673 | 11407 | 18604 | 38042 | 2,828,315 | 1,429,953 | 5,139 |
|  |  | 60 | 13783 | 4170 | 10604 | 17021 | 39465 | 2,867,459 | 1,438,719 | 5,065 |
|  |  | 80 | 12892 | 3902 | 10177 | 16176 | 40220 | 2,889,264 | 1,443,679 | 5,027 |
|  | ALT>35/25 | 20 | 20778 | 6170 | 14495 | 23923 | 32438 | 2,693,592 | 1,404,629 | 5,040 |
|  |  | 40 | 16108 | 4833 | 12416 | 19814 | 36005 | 2,775,287 | 1,423,680 | 4,821 |
|  |  | 60 | 14303 | 4300 | 11593 | 18167 | 37415 | 2,810,356 | 1,432,303 | 4,733 |
|  |  | 80 | 13348 | 4014 | 11153 | 17284 | 38168 | 2,829,904 | 1,437,208 | 4,687 |
| 30-80 | ALT>40 | 40 | 27963 | 7973 | 19781 | 31660 | 23454 | 2,537,043 | 1,368,221 | 7,745 |
|  |  | 60 | 26093 | 7486 | 19043 | 30222 | 24790 | 2,574,839 | 1,373,483 | 7,551 |
|  |  | 80 | 25026 | 7202 | 18614 | 29382 | 25563 | 2,597,293 | 1,376,728 | 7,440 |
|  | THBs | 20 | 16953 | 4905 | 11397 | 19054 | 39983 | 3,029,084 | 1,429,945 | 7,940 |
|  |  | 40 | 14857 | 3957 | 9821 | 15982 | 42850 | 3,146,851 | 1,448,625 | 7,602 |
|  |  | 60 | 13753 | 3614 | 9247 | 14860 | 43902 | 3,195,931 | 1,456,341 | 7,504 |
|  |  | 80 | 12189 | 3437 | 8952 | 14282 | 44447 | 3,222,952 | 1,460,537 | 7,461 |
|  | ALT>30/19 | 20 | 21180 | 6311 | 14276 | 23964 | 32927 | 2,713,904 | 1,405,129 | 5,420 |
|  |  | 40 | 16691 | 5030 | 12212 | 19961 | 36572 | 2,804,782 | 1,424,015 | 5,245 |
|  |  | 60 | 14945 | 4517 | 11389 | 18346 | 38022 | 2,844,184 | 1,432,585 | 5,170 |
|  |  | 80 | 14019 | 4241 | 10949 | 17476 | 38799 | 2,866,266 | 1,437,467 | 5,130 |
|  | ALT>35/25 | 20 | 21956 | 6505 | 15219 | 25154 | 31157 | 2,673,708 | 1,399,829 | 5,144 |
|  |  | 40 | 17256 | 5171 | 13140 | 21063 | 34725 | 2,755,807 | 1,418,205 | 4,936 |
|  |  | 60 | 15411 | 4631 | 12302 | 19393 | 36161 | 2,791,478 | 1,426,623 | 4,850 |
|  |  | 80 | 14427 | 4339 | 11851 | 18490 | 36934 | 2,811,492 | 1,431,443 | 4,804 |
| 40-80 | ALT>40 | 40 | 28787 | 8194 | 20115 | 32317 | 22852 | 2,522,580 | 1,366,082 | 8,014 |
|  |  | 60 | 27289 | 7809 | 19533 | 31188 | 23909 | 2,553,308 | 1,370,228 | 7,806 |
|  |  | 80 | 26432 | 7585 | 19193 | 30527 | 24522 | 2,571,565 | 1,372,789 | 7,686 |
|  | THBs | 20 | 19189 | 5788 | 13439 | 22384 | 36064 | 2,925,646 | 1,415,031 | 8,204 |
|  |  | 40 | 15762 | 4777 | 11788 | 19172 | 39054 | 3,037,112 | 1,432,417 | 7,784 |
|  |  | 60 | 14454 | 4385 | 11148 | 17918 | 40217 | 3,084,703 | 1,439,882 | 7,655 |
|  |  | 80 | 13763 | 4177 | 10806 | 17250 | 40837 | 3,111,242 | 1,444,034 | 7,594 |
|  | ALT>30/19 | 20 | 23379 | 6896 | 15724 | 26250 | 30403 | 2,670,985 | 1,395,445 | 5,677 |
|  |  | 40 | 18837 | 5626 | 13695 | 22320 | 33998 | 2,761,133 | 1,412,924 | 5,511 |
|  |  | 60 | 17014 | 5100 | 12858 | 20681 | 35474 | 2,801,070 | 1,421,038 | 5,435 |
|  |  | 80 | 16032 | 4813 | 12403 | 19784 | 36277 | 2,823,706 | 1,425,719 | 5,393 |
|  | ALT>35/25 | 20 | 24002 | 7048 | 16488 | 27202 | 28974 | 2,636,478 | 1,391,163 | 5,367 |
|  |  | 40 | 19291 | 5736 | 14449 | 23206 | 32502 | 2,719,354 | 1,408,193 | 5,196 |
|  |  | 60 | 17386 | 5189 | 13602 | 21525 | 33964 | 2,756,196 | 1,416,165 | 5,117 |
|  |  | 80 | 16357 | 4889 | 13139 | 20602 | 34763 | 2,777,115 | 1,420,785 | 5,074 |

# Table S14. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2033 by 2040.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2040 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 19,456 | 2,783 | 8,930 | 10,521 | 6,500 | 1,275,773 | 916,733 | 0 |
| 18-80 | ALT>40 | 40 | 18,141 | 2,698 | 8,796 | 10,368 | 6,857 | 1,306,763 | 916,917 | 168,250 |
|  |  | 60 | 17,430 | 2,645 | 8,716 | 10,270 | 7,060 | 1,324,920 | 917,049 | 155,344 |
|  |  | 80 | 16,997 | 2,610 | 8,664 | 10,203 | 7,187 | 1,336,642 | 917,147 | 146,915 |
| 18-80 | THBs | 20 | 17,283 | 2,678 | 7,998 | 9,888 | 9,475 | 1,573,412 | 923,006 | 47,447 |
|  |  | 40 | 15,403 | 2,541 | 7,587 | 9,509 | 10,828 | 1,690,097 | 924,469 | 53,553 |
|  |  | 60 | 14,629 | 2,468 | 7,385 | 9,300 | 11,435 | 1,737,851 | 925,322 | 53,797 |
|  |  | 80 | 14,240 | 2,425 | 7,272 | 9,175 | 11,763 | 1,762,801 | 925,859 | 53,365 |
|  | ALT>30/19 | 20 | 18,168 | 2,722 | 8,355 | 10,110 | 7,854 | 1,401,398 | 921,955 | 24,053 |
|  |  | 40 | 16,338 | 2,595 | 8,060 | 9,822 | 8,700 | 1,471,707 | 922,917 | 31,683 |
|  |  | 60 | 15,462 | 2,522 | 7,898 | 9,649 | 9,136 | 1,504,985 | 923,517 | 33,786 |
|  |  | 80 | 14,974 | 2,476 | 7,800 | 9,538 | 9,392 | 1,523,804 | 923,916 | 34,528 |
|  | ALT>35/25 | 20 | 18,602 | 2,763 | 8,527 | 10,280 | 7,645 | 1,371,901 | 922,111 | 17,872 |
|  |  | 40 | 16,705 | 2,631 | 8,236 | 9,991 | 8,441 | 1,437,517 | 922,998 | 25,814 |
|  |  | 60 | 15,788 | 2,555 | 8,075 | 9,816 | 8,854 | 1,468,863 | 923,556 | 28,298 |
|  |  | 80 | 15,272 | 2,506 | 7,976 | 9,703 | 9,098 | 1,486,670 | 923,929 | 29,305 |
| 30-80 | ALT>40 | 40 | 18,263 | 2,706 | 8,808 | 10,381 | 6,824 | 1,303,882 | 916,900 | 168,315 |
|  |  | 60 | 17,618 | 2,658 | 8,734 | 10,291 | 7,008 | 1,320,354 | 917,019 | 155,403 |
|  |  | 80 | 17,225 | 2,626 | 8,686 | 10,230 | 7,124 | 1,330,990 | 917,108 | 146,975 |
|  | THBs | 20 | 17,494 | 2,690 | 8,077 | 9,942 | 9,199 | 1,545,936 | 922,510 | 46,763 |
|  |  | 40 | 15,666 | 2,557 | 7,689 | 9,582 | 10,459 | 1,654,615 | 923,864 | 53,120 |
|  |  | 60 | 14,898 | 2,486 | 7,499 | 9,383 | 11,030 | 1,699,596 | 924,657 | 53,486 |
|  |  | 80 | 14,505 | 2,444 | 7,390 | 9,262 | 11,339 | 1,723,303 | 925,157 | 53,120 |
|  | ALT>30/19 | 20 | 18,296 | 2,730 | 8,402 | 10,145 | 7,730 | 1,390,146 | 921,555 | 23,718 |
|  |  | 40 | 16,514 | 2,607 | 8,121 | 9,868 | 8,531 | 1,456,837 | 922,452 | 31,656 |
|  |  | 60 | 15,653 | 2,535 | 7,966 | 9,702 | 8,945 | 1,488,719 | 923,015 | 33,897 |
|  |  | 80 | 15,170 | 2,490 | 7,872 | 9,595 | 9,190 | 1,506,879 | 923,390 | 34,715 |
|  | ALT>35/25 | 20 | 18,689 | 2,766 | 8,557 | 10,297 | 7,540 | 1,363,210 | 921,667 | 17,718 |
|  |  | 40 | 16,845 | 2,639 | 8,280 | 10,020 | 8,296 | 1,425,620 | 922,495 | 26,005 |
|  |  | 60 | 15,946 | 2,564 | 8,126 | 9,852 | 8,689 | 1,455,741 | 923,017 | 28,639 |
|  |  | 80 | 15,438 | 2,517 | 8,032 | 9,743 | 8,923 | 1,472,980 | 923,367 | 29,726 |
| 40-80 | ALT>40 | 40 | 18,486 | 2,721 | 8,831 | 10,407 | 6,763 | 1,298,567 | 916,868 | 168,375 |
|  |  | 60 | 17,962 | 2,682 | 8,771 | 10,334 | 6,913 | 1,311,926 | 916,965 | 155,452 |
|  |  | 80 | 17,643 | 2,656 | 8,732 | 10,285 | 7,007 | 1,320,551 | 917,037 | 147,023 |
|  | THBs | 20 | 17,886 | 2,712 | 8,251 | 10,069 | 8,688 | 1,496,253 | 921,397 | 47,266 |
|  |  | 40 | 16,154 | 2,588 | 7,911 | 9,748 | 9,777 | 1,590,200 | 922,532 | 54,219 |
|  |  | 60 | 15,396 | 2,521 | 7,741 | 9,568 | 10,278 | 1,630,091 | 923,200 | 54,784 |
|  |  | 80 | 14,996 | 2,480 | 7,643 | 9,457 | 10,554 | 1,651,521 | 923,625 | 54,513 |
|  | ALT>30/19 | 20 | 18,536 | 2,744 | 8,514 | 10,234 | 7,498 | 1,370,615 | 920,627 | 24,355 |
|  |  | 40 | 16,841 | 2,628 | 8,260 | 9,980 | 8,217 | 1,430,747 | 921,393 | 33,253 |
|  |  | 60 | 16,008 | 2,560 | 8,120 | 9,826 | 8,592 | 1,460,110 | 921,876 | 35,840 |
|  |  | 80 | 15,535 | 2,517 | 8,033 | 9,727 | 8,815 | 1,477,093 | 922,200 | 36,821 |
|  | ALT>35/25 | 20 | 18,850 | 2,773 | 8,635 | 10,351 | 7,344 | 1,347,902 | 920,707 | 18,148 |
|  |  | 40 | 17,105 | 2,654 | 8,385 | 10,097 | 8,025 | 1,404,467 | 921,414 | 27,487 |
|  |  | 60 | 16,242 | 2,583 | 8,245 | 9,942 | 8,384 | 1,432,365 | 921,864 | 30,518 |
|  |  | 80 | 15,748 | 2,538 | 8,158 | 9,841 | 8,597 | 1,448,581 | 922,167 | 31,799 |

# Table S15. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2033 by 2045.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2045 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 22,260 | 3,843 | 11,265 | 14,545 | 8,928 | 1,584,696 | 1,039,995 | 0 |
| 18-80 | ALT>40 | 40 | 20,326 | 3,644 | 10,980 | 14,135 | 9,561 | 1,627,064 | 1,040,609 | 68,982 |
|  |  | 60 | 19,374 | 3,535 | 10,825 | 13,904 | 9,890 | 1,650,228 | 1,041,007 | 64,735 |
|  |  | 80 | 18,817 | 3,467 | 10,730 | 13,758 | 10,088 | 1,664,682 | 1,041,283 | 62,086 |
| 18-80 | THBs | 20 | 18,275 | 3,513 | 9,551 | 13,035 | 13,912 | 1,978,657 | 1,051,480 | 34,303 |
|  |  | 40 | 16,037 | 3,235 | 8,904 | 12,235 | 15,593 | 2,086,560 | 1,054,589 | 34,388 |
|  |  | 60 | 15,233 | 3,114 | 8,627 | 11,868 | 16,268 | 2,127,990 | 1,056,155 | 33,620 |
|  |  | 80 | 14,834 | 3,048 | 8,478 | 11,665 | 16,625 | 2,149,897 | 1,057,075 | 33,092 |
|  | ALT>30/19 | 20 | 19,863 | 3,647 | 10,230 | 13,628 | 11,344 | 1,755,121 | 1,048,738 | 19,491 |
|  |  | 40 | 17,440 | 3,374 | 9,694 | 12,944 | 12,611 | 1,830,547 | 1,051,005 | 22,330 |
|  |  | 60 | 16,409 | 3,238 | 9,433 | 12,593 | 13,197 | 1,863,647 | 1,052,258 | 22,747 |
|  |  | 80 | 15,853 | 3,159 | 9,283 | 12,385 | 13,529 | 1,882,033 | 1,053,040 | 22,793 |
|  | ALT>35/25 | 20 | 20,398 | 3,718 | 10,464 | 13,901 | 10,990 | 1,724,083 | 1,048,550 | 16,293 |
|  |  | 40 | 17,879 | 3,435 | 9,927 | 13,208 | 12,196 | 1,795,021 | 1,050,686 | 19,673 |
|  |  | 60 | 16,794 | 3,293 | 9,664 | 12,849 | 12,760 | 1,826,327 | 1,051,878 | 20,334 |
|  |  | 80 | 16,205 | 3,210 | 9,511 | 12,634 | 13,079 | 1,843,748 | 1,052,626 | 20,509 |
| 30-80 | ALT>40 | 40 | 20,506 | 3,663 | 11,005 | 14,172 | 9,502 | 1,623,122 | 1,040,552 | 69,002 |
|  |  | 60 | 19,642 | 3,563 | 10,864 | 13,962 | 9,801 | 1,644,134 | 1,040,913 | 64,751 |
|  |  | 80 | 19,136 | 3,502 | 10,777 | 13,829 | 9,981 | 1,657,247 | 1,041,163 | 62,105 |
|  | THBs | 20 | 18,655 | 3,546 | 9,702 | 13,171 | 13,450 | 1,942,314 | 1,050,543 | 33,904 |
|  |  | 40 | 16,444 | 3,276 | 9,087 | 12,405 | 15,034 | 2,044,087 | 1,053,440 | 34,168 |
|  |  | 60 | 15,626 | 3,155 | 8,821 | 12,050 | 15,677 | 2,083,802 | 1,054,908 | 33,467 |
|  |  | 80 | 15,213 | 3,089 | 8,676 | 11,852 | 16,019 | 2,105,006 | 1,055,776 | 32,970 |
|  | ALT>30/19 | 20 | 20,093 | 3,668 | 10,319 | 13,710 | 11,122 | 1,739,867 | 1,048,052 | 19,259 |
|  |  | 40 | 17,716 | 3,401 | 9,806 | 13,051 | 12,331 | 1,812,246 | 1,050,181 | 22,339 |
|  |  | 60 | 16,692 | 3,268 | 9,555 | 12,710 | 12,894 | 1,844,428 | 1,051,365 | 22,843 |
|  |  | 80 | 16,136 | 3,190 | 9,409 | 12,508 | 13,213 | 1,862,450 | 1,052,107 | 22,932 |
|  | ALT>35/25 | 20 | 20,577 | 3,732 | 10,531 | 13,956 | 10,800 | 1,711,464 | 1,047,837 | 16,164 |
|  |  | 40 | 18,113 | 3,456 | 10,017 | 13,288 | 11,954 | 1,779,752 | 1,049,843 | 19,807 |
|  |  | 60 | 17,040 | 3,317 | 9,764 | 12,941 | 12,496 | 1,810,301 | 1,050,968 | 20,561 |
|  |  | 80 | 16,454 | 3,235 | 9,616 | 12,732 | 12,804 | 1,827,443 | 1,051,676 | 20,781 |
| 40-80 | ALT>40 | 40 | 20,834 | 3,696 | 11,054 | 14,242 | 9,395 | 1,615,858 | 1,040,446 | 69,019 |
|  |  | 60 | 20,132 | 3,616 | 10,939 | 14,071 | 9,637 | 1,632,899 | 1,040,739 | 64,773 |
|  |  | 80 | 19,721 | 3,566 | 10,869 | 13,963 | 9,784 | 1,643,534 | 1,040,942 | 62,123 |
|  | THBs | 20 | 19,354 | 3,608 | 10,010 | 13,450 | 12,594 | 1,876,361 | 1,048,504 | 34,277 |
|  |  | 40 | 17,196 | 3,350 | 9,457 | 12,752 | 13,999 | 1,966,843 | 1,050,972 | 34,813 |
|  |  | 60 | 16,352 | 3,232 | 9,212 | 12,420 | 14,582 | 2,003,405 | 1,052,240 | 34,194 |
|  |  | 80 | 15,912 | 3,166 | 9,077 | 12,232 | 14,897 | 2,023,319 | 1,052,997 | 33,735 |
|  | ALT>30/19 | 20 | 20,520 | 3,706 | 10,510 | 13,887 | 10,709 | 1,713,083 | 1,046,494 | 19,755 |
|  |  | 40 | 18,226 | 3,452 | 10,039 | 13,275 | 11,811 | 1,779,932 | 1,048,343 | 23,386 |
|  |  | 60 | 17,215 | 3,323 | 9,806 | 12,954 | 12,330 | 1,810,464 | 1,049,382 | 24,050 |
|  |  | 80 | 16,660 | 3,247 | 9,670 | 12,762 | 12,627 | 1,827,840 | 1,050,038 | 24,210 |
|  | ALT>35/25 | 20 | 20,909 | 3,757 | 10,677 | 14,081 | 10,448 | 1,688,990 | 1,046,309 | 16,516 |
|  |  | 40 | 18,544 | 3,495 | 10,206 | 13,461 | 11,504 | 1,752,448 | 1,048,055 | 20,812 |
|  |  | 60 | 17,494 | 3,362 | 9,971 | 13,135 | 12,006 | 1,781,627 | 1,049,045 | 21,761 |
|  |  | 80 | 16,913 | 3,283 | 9,833 | 12,939 | 12,294 | 1,798,275 | 1,049,673 | 22,069 |

# Table S16. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2033 by 2050.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | By 2050 | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 24,454 | 4,850 | 13,387 | 18,428 | 11,447 | 1,833,135 | 1,132,692 | 0 |
| 18-80 | ALT>40 | 40 | 22,031 | 4,519 | 12,926 | 17,681 | 12,367 | 1,882,734 | 1,133,979 | 38,523 |
|  |  | 60 | 20,897 | 4,349 | 12,692 | 17,290 | 12,820 | 1,908,785 | 1,134,764 | 36,502 |
|  |  | 80 | 20,246 | 4,248 | 12,553 | 17,052 | 13,087 | 1,924,724 | 1,135,289 | 35,269 |
| 18-80 | THBs | 20 | 18,884 | 4,206 | 10,797 | 15,726 | 18,255 | 2,269,892 | 1,150,499 | 24,527 |
|  |  | 40 | 16,517 | 3,803 | 9,958 | 14,517 | 20,131 | 2,366,597 | 1,155,332 | 23,563 |
|  |  | 60 | 15,701 | 3,643 | 9,624 | 14,016 | 20,853 | 2,404,011 | 1,157,584 | 22,934 |
|  |  | 80 | 15,297 | 3,560 | 9,447 | 13,750 | 21,232 | 2,424,017 | 1,158,865 | 22,576 |
|  | ALT>30/19 | 20 | 21,023 | 4,462 | 11,803 | 16,791 | 14,968 | 2,026,824 | 1,145,612 | 14,992 |
|  |  | 40 | 18,234 | 4,037 | 11,031 | 15,657 | 16,588 | 2,101,100 | 1,149,444 | 15,996 |
|  |  | 60 | 17,112 | 3,845 | 10,682 | 15,125 | 17,296 | 2,132,745 | 1,151,424 | 15,994 |
|  |  | 80 | 16,517 | 3,737 | 10,487 | 14,822 | 17,688 | 2,150,192 | 1,152,620 | 15,910 |
|  | ALT>35/25 | 20 | 21,631 | 4,564 | 12,094 | 17,170 | 14,467 | 1,996,928 | 1,144,950 | 13,363 |
|  |  | 40 | 18,728 | 4,122 | 11,314 | 16,012 | 16,023 | 2,066,774 | 1,148,618 | 14,670 |
|  |  | 60 | 17,545 | 3,920 | 10,959 | 15,463 | 16,709 | 2,096,607 | 1,150,532 | 14,769 |
|  |  | 80 | 16,914 | 3,806 | 10,759 | 15,150 | 17,090 | 2,113,064 | 1,151,693 | 14,732 |
| 30-80 | ALT>40 | 40 | 22,255 | 4,549 | 12,968 | 17,749 | 12,282 | 1,878,116 | 1,133,859 | 38,535 |
|  |  | 60 | 21,226 | 4,396 | 12,755 | 17,394 | 12,693 | 1,901,746 | 1,134,571 | 36,512 |
|  |  | 80 | 20,636 | 4,303 | 12,627 | 17,177 | 12,935 | 1,916,205 | 1,135,047 | 35,279 |
|  | THBs | 20 | 19,410 | 4,269 | 11,030 | 15,973 | 17,624 | 2,229,680 | 1,149,008 | 24,303 |
|  |  | 40 | 17,038 | 3,872 | 10,225 | 14,806 | 19,411 | 2,321,985 | 1,153,539 | 23,449 |
|  |  | 60 | 16,192 | 3,711 | 9,899 | 14,314 | 20,108 | 2,358,333 | 1,155,671 | 22,856 |
|  |  | 80 | 15,765 | 3,626 | 9,725 | 14,050 | 20,477 | 2,377,956 | 1,156,892 | 22,513 |
|  | ALT>30/19 | 20 | 21,349 | 4,500 | 11,943 | 16,940 | 14,644 | 2,009,539 | 1,144,570 | 14,852 |
|  |  | 40 | 18,594 | 4,084 | 11,199 | 15,841 | 16,200 | 2,081,551 | 1,148,189 | 16,030 |
|  |  | 60 | 17,471 | 3,894 | 10,861 | 15,321 | 16,885 | 2,112,685 | 1,150,072 | 16,084 |
|  |  | 80 | 16,870 | 3,787 | 10,670 | 15,024 | 17,265 | 2,129,996 | 1,151,215 | 16,027 |
|  | ALT>35/25 | 20 | 21,899 | 4,592 | 12,206 | 17,282 | 14,189 | 1,982,120 | 1,143,913 | 13,277 |
|  |  | 40 | 19,041 | 4,161 | 11,456 | 16,162 | 15,686 | 2,050,093 | 1,147,376 | 14,775 |
|  |  | 60 | 17,862 | 3,962 | 11,111 | 15,627 | 16,351 | 2,079,577 | 1,149,194 | 14,934 |
|  |  | 80 | 17,229 | 3,849 | 10,917 | 15,320 | 16,721 | 2,095,986 | 1,150,303 | 14,926 |
| 40-80 | ALT>40 | 40 | 22,667 | 4,606 | 13,046 | 17,877 | 12,126 | 1,869,614 | 1,133,638 | 38,545 |
|  |  | 60 | 21,831 | 4,481 | 12,873 | 17,588 | 12,460 | 1,888,778 | 1,134,215 | 36,523 |
|  |  | 80 | 21,351 | 4,406 | 12,770 | 17,412 | 12,657 | 1,900,505 | 1,134,601 | 35,291 |
|  | THBs | 20 | 20,379 | 4,384 | 11,488 | 16,458 | 16,455 | 2,156,525 | 1,145,852 | 24,573 |
|  |  | 40 | 17,997 | 3,999 | 10,748 | 15,370 | 18,078 | 2,240,691 | 1,149,774 | 23,858 |
|  |  | 60 | 17,097 | 3,837 | 10,439 | 14,897 | 18,729 | 2,275,067 | 1,151,654 | 23,306 |
|  |  | 80 | 16,628 | 3,749 | 10,272 | 14,637 | 19,078 | 2,293,980 | 1,152,745 | 22,982 |
|  | ALT>30/19 | 20 | 21,950 | 4,572 | 12,228 | 17,242 | 14,042 | 1,978,974 | 1,142,270 | 15,226 |
|  |  | 40 | 19,258 | 4,172 | 11,537 | 16,208 | 15,479 | 2,046,859 | 1,145,458 | 16,741 |
|  |  | 60 | 18,133 | 3,985 | 11,218 | 15,713 | 16,121 | 2,077,075 | 1,147,138 | 16,886 |
|  |  | 80 | 17,523 | 3,879 | 11,037 | 15,427 | 16,480 | 2,094,149 | 1,148,166 | 16,867 |
|  | ALT>35/25 | 20 | 22,393 | 4,645 | 12,437 | 17,513 | 13,672 | 1,955,585 | 1,141,729 | 13,550 |
|  |  | 40 | 19,617 | 4,233 | 11,741 | 16,462 | 15,062 | 2,020,137 | 1,144,786 | 15,463 |
|  |  | 60 | 18,447 | 4,039 | 11,417 | 15,955 | 15,686 | 2,048,992 | 1,146,411 | 15,734 |
|  |  | 80 | 17,811 | 3,928 | 11,233 | 15,661 | 16,037 | 2,065,323 | 1,147,410 | 15,775 |

# Table S17. Effectiveness and cost-effectiveness of different expanded treatment strategies implemented from 2033 by lifetime.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Treatment strategies | | | Lifetime | | | | | | | |
| Age groups, years | Methods (ALT>ULN, U/L) | Tx (%) | Number of CC | Number of DC | Number of HCC | Number of HBV-related death | Number of HBsAg loss | Cost for HBV  treatment (US$,  thousand) | Number of  accumulated  QALYs | Incremental  cost-effective  ratio  (Cost/QALY  gained) |
| 18-80 | Status quo | 20 | 32046 | 9000 | 21332 | 34655 | 20617 | 2,459,898 | 1,358,261 | 0 |
| 18-80 | ALT>40 | 40 | 28582 | 8161 | 20066 | 32238 | 22957 | 2,516,053 | 1,364,574 | 8,896 |
|  |  | 60 | 26981 | 7758 | 19458 | 31065 | 24069 | 2,543,440 | 1,367,932 | 8,638 |
|  |  | 80 | 26064 | 7523 | 19102 | 30377 | 24715 | 2,559,665 | 1,370,011 | 8,491 |
| 18-80 | THBs | 20 | 19925 | 5639 | 12519 | 21365 | 37867 | 2,870,491 | 1,409,968 | 7,941 |
|  |  | 40 | 18893 | 4937 | 11331 | 19082 | 40053 | 2,947,568 | 1,421,513 | 7,710 |
|  |  | 60 | 17101 | 4692 | 10913 | 18276 | 40829 | 2,979,187 | 1,426,223 | 7,641 |
|  |  | 80 | 16705 | 4569 | 10701 | 17869 | 41224 | 2,996,460 | 1,428,763 | 7,611 |
|  | ALT>30/19 | 20 | 22704 | 6796 | 14921 | 25389 | 31754 | 2,648,814 | 1,393,924 | 5,297 |
|  |  | 40 | 19201 | 5829 | 13341 | 22377 | 34557 | 2,708,828 | 1,405,473 | 5,273 |
|  |  | 60 | 17858 | 5444 | 12717 | 21172 | 35659 | 2,734,351 | 1,410,691 | 5,235 |
|  |  | 80 | 17150 | 5239 | 12385 | 20527 | 36246 | 2,748,524 | 1,413,653 | 5,211 |
|  | ALT>35/25 | 20 | 23285 | 6933 | 15735 | 26362 | 30260 | 2,627,901 | 1,390,656 | 5,186 |
|  |  | 40 | 19580 | 5913 | 14129 | 23249 | 33017 | 2,683,147 | 1,402,128 | 5,089 |
|  |  | 60 | 18145 | 5503 | 13489 | 21990 | 34113 | 2,706,669 | 1,407,353 | 5,027 |
|  |  | 80 | 17386 | 5284 | 13146 | 21313 | 34699 | 2,719,737 | 1,410,332 | 4,990 |
| 30-80 | ALT>40 | 40 | 28952 | 8263 | 20221 | 32546 | 22678 | 2,511,007 | 1,363,808 | 9,214 |
|  |  | 60 | 27517 | 7908 | 19685 | 31517 | 23662 | 2,535,949 | 1,366,769 | 8,938 |
|  |  | 80 | 26693 | 7700 | 19370 | 30911 | 24236 | 2,550,728 | 1,368,606 | 8,780 |
|  | THBs | 20 | 20672 | 6051 | 13465 | 22927 | 36046 | 2,834,965 | 1,404,432 | 8,123 |
|  |  | 40 | 19995 | 5315 | 12231 | 20559 | 38302 | 2,910,045 | 1,415,572 | 7,854 |
|  |  | 60 | 18310 | 5047 | 11778 | 19686 | 39133 | 2,941,212 | 1,420,219 | 7,768 |
|  |  | 80 | 17858 | 4909 | 11543 | 19235 | 39565 | 2,958,349 | 1,422,758 | 7,728 |
|  | ALT>30/19 | 20 | 23715 | 7075 | 15609 | 26488 | 30525 | 2,633,370 | 1,390,178 | 5,435 |
|  |  | 40 | 20180 | 6109 | 14034 | 23493 | 33316 | 2,693,154 | 1,401,259 | 5,425 |
|  |  | 60 | 18798 | 5717 | 13400 | 22269 | 34435 | 2,718,858 | 1,406,334 | 5,387 |
|  |  | 80 | 18064 | 5506 | 13058 | 21607 | 35036 | 2,733,215 | 1,409,238 | 5,362 |
|  | ALT>35/25 | 20 | 24233 | 7193 | 16350 | 27360 | 29185 | 2,613,837 | 1,387,193 | 5,321 |
|  |  | 40 | 20515 | 6181 | 14755 | 24279 | 31931 | 2,669,271 | 1,398,182 | 5,245 |
|  |  | 60 | 19051 | 5767 | 14106 | 23009 | 33042 | 2,693,148 | 1,403,252 | 5,184 |
|  |  | 80 | 18269 | 5543 | 13756 | 22319 | 33641 | 2,706,498 | 1,406,164 | 5,148 |
| 40-80 | ALT>40 | 40 | 29583 | 8425 | 20466 | 33021 | 22233 | 2,501,494 | 1,362,586 | 9,618 |
|  |  | 60 | 28436 | 8146 | 20045 | 32218 | 23009 | 2,521,816 | 1,364,904 | 9,320 |
|  |  | 80 | 27776 | 7982 | 19798 | 31744 | 23462 | 2,533,861 | 1,366,345 | 9,149 |
|  | THBs | 20 | 22215 | 6713 | 15117 | 25511 | 32872 | 2,768,088 | 1,394,521 | 8,499 |
|  |  | 40 | 20503 | 5940 | 13848 | 23076 | 35191 | 2,839,523 | 1,404,776 | 8,161 |
|  |  | 60 | 19065 | 5638 | 13352 | 22119 | 36096 | 2,869,898 | 1,409,213 | 8,047 |
|  |  | 80 | 18716 | 5477 | 13088 | 21608 | 36579 | 2,886,809 | 1,411,690 | 7,990 |
|  | ALT>30/19 | 20 | 25455 | 7515 | 16814 | 28299 | 28443 | 2,604,599 | 1,383,329 | 5,772 |
|  |  | 40 | 21898 | 6565 | 15282 | 25388 | 31173 | 2,663,917 | 1,393,488 | 5,791 |
|  |  | 60 | 20462 | 6167 | 14644 | 24159 | 32303 | 2,689,980 | 1,398,245 | 5,754 |
|  |  | 80 | 19686 | 5948 | 14295 | 23482 | 32920 | 2,704,699 | 1,401,000 | 5,728 |
|  | ALT>35/25 | 20 | 25861 | 7604 | 17407 | 28985 | 27374 | 2,587,382 | 1,380,980 | 5,611 |
|  |  | 40 | 22157 | 6617 | 15860 | 26007 | 30065 | 2,643,133 | 1,391,053 | 5,588 |
|  |  | 60 | 20653 | 6201 | 15211 | 24742 | 31187 | 2,667,695 | 1,395,801 | 5,535 |
|  |  | 80 | 19839 | 5972 | 14855 | 24044 | 31802 | 2,681,587 | 1,398,560 | 5,501 |

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