**Supplementary Table 1.** Comparison of the mapping rate, memory usage, and run time between HISAT2 and BWA aligner

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|  | Run time | Memory usage (KB) | Mapping rates (%) |
| HISAT2 | BWA (MEM) | HIAST2 | BWA (MEM) | HIAST2 | BWA (MEM) |
| Thread 2 | Thread 4 | Thread 8 | Thread 2 | Thread 4 | Thread 8 |
| S1 | 0m34.720s | 0m16.868s | 0m17.834s | 1m20.332s | 0m42.727s | 0m31.437s | 884 | 418,008 | 0.19 | 88.87 |
| S2 | 0m55.342s | 0m13.532s | 0m13.394s | 1m35.105s | 0m53.374s | 0m36.142s | 888 | 411,920 | 0.26 | 93.23 |
| S3 | 0m48.453s | 0m12.527s | 0m13.232s | 2m21.670s | 1m17.922s | 0m42.026s | 856 | 388,024 | 0.23 | 94.62 |
| S4 | 0m42.657s | 0m13.654s | 0m14.310s | 1m26.063s | 0m47.207s | 0m28.993s | 856 | 266,668 | 0.16 | 89.66 |
| S5 | 0m40.107s | 0m17.305s | 0m14.020s | 0m38.776s | 0m23.869s | 0m15.906s | 888 | 421,844 | 0.15 | 90.34 |