**TABLE 2. RECOMMENDATIONS FOR CARBAMAZEPINE THERAPY BASED ON *HLA-B* AND *HLA-A* GENOTYPES**

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| Genotypea | Implication | Therapeutic recommendation | Classification of recommendation | Considerations for other aromatic anticonvulsants |
| *HLA-B\*15:02* negative and *HLA-A\*31:01* negative | Normal risk of carbamazepine-induced SJS/TEN, DRESS, and MPE | Use carbamazepine per standard dosing guidelines.b | Strong | N/A |
| *HLA-B\*15:02* negative and *HLA-A\*31:01* positive | Greater risk of carbamazepine-induced SJS/TEN, DRESS, and MPE | If patient is carbamazepine-naïve and alternative agents are available, do not use carbamazepine. | Strong | Other aromatic anticonvulsantsd have very limited evidence, if any, linking SJS/TEN, DRESS, and/or MPE with the *HLA-A\*31:01* allele, and thus no recommendation can be made with respect to choosing another aromatic anticonvulsant as an alternative agent. |
|  |  | If patient is carbamazepine-naïve and alternative agents are not available, consider the use of carbamazepine with increased frequency of clinical monitoring. Discontinue therapy at first evidence of a cutaneous adverse reaction. | Optional | N/A |
|  |  | The latency period for cutaneous adverse drug reactions is variable depending on phenotype; however, all usually occur within three months of regular dosing. Therefore, if the patient has previously used carbamazepine consistently for longer than three months without incidence of cutaneous adverse reactions, cautiously consider use of carbamazepine. | Optional | Previous tolerance of carbamazepine is not indicative of tolerance to other aromatic anticonvulsants.d |
| *HLA-B\*15:02* positivec and any *HLA-A\*31:01* genotype (or *HLA-A\*31:01* genotype unknown) | Greater risk of carbamazepine-induced SJS/TEN | If patient is carbamazepine-naïve, do not use carbamazepine. | Strong | Other aromatic anticonvulsantsd have weaker evidence linking SJS/TEN with the *HLA-B\*15:02* allele; however, caution should still be used in choosing an alternative agent.  |
|  |  | The latency period for drug-induced SJS/TEN is short with continuous dosing and adherence to therapy (~4-28 days), and cases usually occur within three months of dosing; therefore, if the patient has previously used carbamazepine consistently for longer than three months without incidence of cutaneous adverse reactions, cautiously consider use of carbamazepine in the future. | Optional | Previous tolerance of carbamazepine is not indicative of tolerance to other aromatic anticonvulsants.d |

DRESS = drug reaction with eosinophilia and systemic symptoms; MPE = maculopapular exanthema; N/A = not applicable; SJS = Stevens-Johnson syndrome; TEN = toxic epidermal necrolysis

aIf only *HLA-B\*15:02* was tested, assume *HLA-A\*31:01* is negative and vice versa.

b*HLA-B\*15:02* has a 100% negative predictive value for carbamazepine-induced SJS/TEN, and its use is currently recommended to guide use of carbamazepine and oxcarbazepine only. Because there is a much weaker association and less than 100% negative predictive value of *HLA-B\*15:02* for SJS/TEN associated with other aromatic anticonvulsants, using these drugs instead of carbamazepine or oxcarbazepine in the setting of a negative *HLA-B\*15:02* test in Southeast Asians will not result in prevention of anticonvulsant-associated SJS/TEN ([40](#_ENREF_40)).

cIn addition to *HLA-B\*15:02*, risk for carbamazepine-induced SJS/TEN has been reported in association with the most common B75 serotype alleles in Southeast Asia, *HLA-B\*15:08*, *HLA-B\*15:11*, and *HLA-B\*15:21*. Although not described, the possibility of carbamazepine-induced SJS/TEN in association with less frequently carried B75 serotype alleles, such as *HLA-B\*15:30* and *HLA-B\*15:31,* should also be considered.

dAromatic anticonvulsants include carbamazepine, oxcarbazepine, eslicarbazepine, lamotrigine, phenytoin, fosphenytoin, and phenobarbital.