Table G-10. Seizure outcomes in studies comparing older versus newer antiepileptic drugs

| Study, Year | Group | N | Change From Baseline in Seizure Frequency Mean (SD) | Time to First Seizure  Specify Units |
| --- | --- | --- | --- | --- |
| Dam, 1989 | Carbamazepine | 82 | No. seizures per month before treatment:  5.8 (14.7)  No of seizures during 48 week maintenance phase treatment:  0.3 (1.4) | - |
| Oxcarbazepine | 83 | No. seizures per month before treatment :  2.9 ( 7.0)  No of seizures during 48 week maintenance phase treatment :  0.4 (3.0) | - |
| Brodie, 1995 | Carbamazepine | 129 | - |  |
| Lamotrigine | 131 | - | There was no significant difference between the drugs in time to first seizure after 6 weeks’ treatment for the whole study population  Hazard ratio: 0.8  95% CI: 0.6-2.1 |
| Reunanen, 1996\* | Carbamazepine | 117 | - |  |
| Lamotrigine100 mg | 115 | - | Time to first seizure  Hazard ratio: 0.8  95% CI: 0.5-1.4 |
| Lamotrigine 200 mg | 111 | - | Time to first seizure  Hazard ratio: 0.9  95% CI: 0.5-1.6 |

| Table G-10. Seizure outcomes in studies comparing older versus newer antiepileptic drugs (continued) | | | | |
| --- | --- | --- | --- | --- |
| Study, Year | Group | N | Change From Baseline in Seizure Frequency Mean (SD) | Time to First Seizure  Specify Units |
| Bill,1997 | Phenytoin |  | Mean Seizure Frequency per week at Baseline: 0.84 (-)  N=144  Mean Seizure Frequency per week during 48 week Maintenance: 0.06 (0.15)  N=119 | - |
| Oxcarbazepine |  | Mean Seizure Frequency per week at Baseline: 0.98 (-)  N=143  Mean Seizure Frequency per week during 48 week Maintenance: 0.08 (0.26)  N=118 | - |
| Christie,1997 | Sodium Valproate |  | Mean seizure frequency/week at baseline: 1.09 (3.13)  N=121  Mean seizure frequency during 48 week maintenance treatment:  0.40 (1.95)  N=106 | - |
| Oxcarbazepine |  | Mean seizure frequency/week at baseline: 0.58 (1.39)  N=128  Mean seizure frequency per week during 48 week maintenance treatment:  0.17 (0.81)  N=106 | - |
| Guerreiro, 1997 | Pheyntion |  | Mean Seizure Frequency at  Baseline: 0.66/week (-)  N=96  Mean Seizure Frequency During 48 week Maintenance: 0.04/ week (-)  N=77 | - |
| Oxcarbazepine |  | Mean Seizure Frequency at Baseline: 0.68/week (-)  N=97  Mean Seizure Frequency During 48 week Maintenance: 0.07/week (-)  N=81 | - |
| Chadwick, 1999 | Carbamazepine | 226 | - | Time to first seizure after dose stabilization  Adjusted hazard ratio:1.79  95% CI: 1.33-2.40 |
| Vigabatrin | 220 | - | Time to first seizure after dose stabilization  Adjusted hazard ratio:1.79  95% CI: 1.33-2.40 |
| Steiner, 1999† | Phenytoin | 95 | - |  |
| Lamotrigine | 86 | - | Time to first seizure after 6 weeks of treatment  1.4, 95% CI: 0.8 to 2.3 |
| Privitera, 2003 | Carbamazepine | 126 | - | NS |
| Valproic Acid | 78 | - | NS |
| Topiramate 100 mg | 210 | - | NS |
| Topiramate 200 mg | 199 | - | NS |
| Wheless, 2004 | Carbamazepine | 23 | - | NS |
| Valproate | 19 | - | NS |
| Topiramate 100 mg | 38 | - | NS |
| Topiramate 200 mg | 39 | - | NS |
| Kang, 2007 | Carbamazepine | 43 | Mean percentage change from baseline to maintenance in seizure frequency  -100% | - |
| Topiramate | 45 | Mean percentage change from baseline to maintenance in seizure frequency  -100% | - |
| Marson, 2007\*  SANAD Arm A | Carbamazepine | 378 | - |  |
| Gabapentin | 377 | - | Pairwise comparison for time to first seizure  Hazard ratio: 1.35  95% CI: 1.14-1.60 |
| Lamotrigine | 378 | - | Pairwise comparison for time to first seizure  Hazard ratio: 1.23  95% CI: 1.04-1.45 |
| Oxcarbazepine | 210 | - | Pairwise comparison for time to first seizure  Hazard ratio: 1.06  95% CI: 0.84-1.33 |
| Topiramate | 378 | - | Pairwise comparison for time to first seizure:  Hazard ratio: 1.05  95% CI: 0.89-1.25 |
| Marson, 2007‡  SANAD  Arm B | Valproic Acid | 238 |  |  |
| Lamotrigine | 239 |  | Pairwise comparison for time to first seizure  Hazard ratio: 0.71  95% CI: 0.57-0.88 |
| Topiramate | 239 |  | Pairwise comparison for time to first seizure  Hazard ratio: 0.91  95% CI: 0.73-1.14 |
| Ramsay , 2010† | Pheyntoin | 127 | - |  |
| Topiramate | 132 | - | HR: 2.0  95% CI: 0.98-4.12 |

- = not reported; 95% CI =95% confidence interval; N = sample size; NS = not significant; SANAD Arm A= Standard and New Antiepileptic Drugs Trial Arm A;   
Arm B = Standard and New Antiepileptic Drugs Trial Arm B; SD = standard deviation  
\*Carbamazepine group is referent  
†Phenytoin group is referent  
‡Valproic acid group is referent