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| **Table 1s. Diagnoses of non-confirmed potential ALS cases (2002-2014).** |
| **Final diagnosis** | **N.** | **%** |
| Other motor neuron diseases1 | 42 | 28.0 |
| Multiple sclerosis | 22 | 14.7 |
| ALS diagnosis written but not confirmable because of clinical data insufficiency | 11 | 7.3 |
| Pseudobulbar syndrome | 11 | 7.3 |
| Vascular encephalopathy2 | 12 | 8.0 |
| Neuropathy3 | 9 | 6.0 |
| Progressive sopranuclear paresis | 8 | 5.3 |
| Multisystemic atrophy  | 5 | 3.3 |
| Wrong ICD-9-CM code | 4 | 2.7 |
| Cervical myelopathy | 4 | 2.7 |
| Muscular dystrophy4 | 3 | 2.0 |
| Cerebral paresis with ataxia | 2 | 1.3 |
| Cerebral ischaemia  | 2 | 1.3 |
| Myositis5 | 2 | 1.3 |
| Normal pressure hydrocephalus | 1 | 0.7 |
| Algodystrophy of nature to be determined | 1 | 0.7 |
| Upper limb distal atrophy | 1 | 0.7 |
| Cognitive impairment | 1 | 0.7 |
| Hemiparesis | 1 | 0.7 |
| Cerebral haemorrhage in a patient affected by Kennedy’s disease | 1 | 0.7 |
| Severe neonatal hypoxic ischaemic encephalopathy | 1 | 0.7 |
| Lower limbs hypotrophy and weakness of suspected degenerative origin | 1 | 0.7 |
| Transverse myelitis | 1 | 0.7 |
| Neuromyopathy of nature to be determined | 1 | 0.7 |
| Immobilization syndrome in a patient affected by Alzheimer disease | 1 | 0.7 |
| Pseudobulbar syndrome and parkinsonism | 1 | 0.7 |
| Sporadic fasciculations and hand interossei muscles atrophy under observation | 1 | 0.7 |
| **Total** | **150** | **100.0** |
| 1 Other motor neuron diseases includes: Kennedy’s disease, primary lateral sclerosis, muscular spinal atrophy not otherwise specified, muscular spinal atrophy type 1, 2 or 3, upper motor neuron disease not otherwise specified, lower motor neuron disease not otherwise specified, progressive spinal amyotrophy, monomyelic amyotrophy, hereditary spastic paraplegia, pseudobulbar paralysis, progressive muscular atrophy, Brown-Vialetto-Van Laere syndrome.2 Vascular encephalopathy includes: chronic vascular encephalopathy, ictus cerebri, TIA, parkinsonism of probably neurovascular origin, normal pressure hydrocephalus, vascular encephalopathy.3 Neuropathy includes: sensitive neuropathy, multifocal neuropathy, chronic polyneuropathy, polyneuritis, meralgia paraesthetica.4 Muscular dystrophy includes: Duchenne muscular dystrophy, muscular dystrophy not otherwise specified.5 Myositis includes: myositis not otherwise specified, inclusion body myositis. |

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| **Table 2s. Crude, standardized, age- and sex- specific IRs of ALS and Poisson 95% CIs (2002-2009).** |
|  | **IR (95%CI)** |
|  | **Men** | **Women** | **Total** |
| **ALS incident cases** | 139 | 137 | 276 |
| **Person-years** | 4,661,841.00 | 4,988,536.49 | 9,650,996.21 |
| **Crude IR** | 2.98(2.52-3.53) | 2.75(2.32-3.25) | 2.86(2.52-3.24) |
|  |  |  |  |
| **Standardized1 IR** | **Italy 2001** | 2.63(2.15-3.12) | 2.36(1.94-2.78) | 2.49(2.27-2.72) |
| **Europe 2000** | 2.27(1.80-2.74) | 2.10(1.55-2.64) | 2.18(1.97-2.40) |
| **USA 2010** | 2.26(1.80-2.73) | 1.92(1.54-2.30) | 2.09(1.88-2.30) |
|  |  |  |  |  |
| **Stratified for age category at diagnosis IR** | **<45** | 0.40(0.19-0.74) | 0.26(0.09-0.56) | 0.33(0.17-0.54) |
| **45-54** | 2.25(1.26-3.72) | 0.91(0.33-1.98) | 1.58(0.97-2.42) |
| **55-64** | 5.55(3.97-7.55) | 5.03(3.40-7.20) | 5.29(4.15-6.72) |
| **65-74** | 10.34(7.67-13.65) | 8.53(6.33-11.26) | 9.36(7.65-11.41) |
| **75-84** | 7.05(4.31-10.86) | 7.10(4.95-9.87) | 7.09(5.46-9.21) |
| **≥85** | 8.41(3.09-18.34) | 2.38(0.77-5.55) | 3.91(1.95-7.00) |
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| 1 Sex-specific IRs are adjusted for age, while overall IRs are adjusted for age and sex. |

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| **Table 3s. Distribution of confirmed ALS cases according to demographic and clinical characteristics (2002-2009).** |
|  | **Men (n=139)** | **Women (n=137)** | **Total (n=276)** |
| **n** | **%** | **n** | **%** | **n** | **%** |
| Age at diagnosis |  |
| <45 years | 10 | 7.2 | 6 | 4.4 | 16 | 5.8 |
| 45-54 years | 15 | 10.8 | 6 | 4.4 | 21 | 7.6 |
| 55-64 years | 36 | 25.9 | 34 | 24.8 | 70 | 25.4 |
| 65-74 years | 52 | 37.4 | 51 | 37.2 | 103 | 37.4 |
| 75-84 years | 20 | 14.4 | 35 | 25.6 | 55 | 19.9 |
| ≥85 years  | 6 | 4.3 | 5 | 3.7 | 11 | 4.0 |
| Median | 67.0 |  | 69.0 |  | 67.0 |  |
| IQR | 58-73 | 62-75 | 61-74 |
| Mean | 65.1 | 67.9 | 66.5 |
| Standard deviation | 12.1 | 11.3 | 11.7 |
| Range (min.-max.) | 21-89 | 20-88 | 20-89 |
|   |
| Familial ALS | 6 | 4.3 | 5 | 3.7 | 11 | 4.0 |
| Genetic mutation |  |
| SOD1 | 2 | 100 | 1 | 33.3 | 3 | 60.0 |
| SOD1 negative | 0 | 0 | 1 | 33.3 | 1 | 20.0 |
| FUS | 0 | 0 | 1 | 33.3 | 1 | 20.0 |
|   |
| Site of disease onset |  |
| Bulbar | 30 | 26.3 | 39 | 34.5 | 69 | 30.4 |
| Spinal | 76 | 66.7 | 59 | 52.2 | 135 | 59.5 |
| Bulbar and spinal | 8 | 7.0 | 15 | 13.3 | 23 | 10.1 |
| Spinal site of onset |  |
| Cervical | 32 | 39.0 | 23 | 31.9 | 55 | 35.7 |
| Lumbosacral | 41 | 50.0 | 32 | 44.4 | 73 | 47.4 |
| Lumbosacral-cervical | 9 | 11.0 | 15 | 20.8 | 24 | 15.6 |
| Thoracic | 0 | 0.0 | 2 | 2.8 | 2 | 1.3 |
| Lumbosacral-thoracic | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
|   |
| Not reported | 25 |  | 24 |  | 49 |  |

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| **Table 4s. Prevalence of ALS in different studies.** |
| **Geographical area**  | **Period** | **Point prevalence** |
| Iran (44) | 21 March 2006 | 1.57 |
| Uruguay (45) | 21 March 2002 | 1.90 |
| South-East England (20) | 30 June 30 2006 | 4.91 |
| New Jersey (46) | 31 December 2011 | 4.97 |
| Catalonia (33) | 31 December 2001 | 5.4 |
| Sicily (25) | 31 December 2006 | 6.0 |
| Liguria (24) | 31 December 2014 | 7.85 |
| Cyprus (47) | 1 January 2015 | 7.9 |
| FVG | 30 June 2014 | 7.98 |
| The Netherlands (32) | 31 December 2008 | 10.32 |
| Sardinia (36) | 31 December 2009 | 10.8 |
| Piedmont and Valle d’Aosta (23) | 31 December 2014 | 12.26 |