

## Weekly update on oseltamivir resistance to pandemic influenza A (H1N1) 2009 viruses

26 May 2010 -- For this reporting week (19 - 26 May 2010), one additional case of oseltamivir resistant pandemic influenza A (H1N1) 2009 viruses has been reported.. It brings the cumulative total to 290<sup>1</sup> so far. All but one of these<sup>2</sup> have the H275Y substitution and are assumed to remain sensitive to zanamivir.

More detailed information on previously reported cases has recently been published:

Zonis Z., *et al.* Community-acquired Oseltamivir-Resistant Pandemic (H1N1) 2009 in Child, Israel [letter]. *Emerging Infectious Diseases*. Vol. 16, No. 6, June 2010. Available online: <http://www.cdc.gov/eid/content/16/6/1045.htm>

Lee Y.H., *et al.* A Case of Oseltamivir-Resistant Pandemic Influenza (H1N1 2009) in a Patient with Acute Myeloid Leukemia [in Korean]. *Infection and Chemotherapy*. Vol. 42, No. 2, April 2010. Available online: <http://www.icjournal.org/articles/view.php?code=ava&year=2010&vol=42&no=2&page=107>

Hong H.L., *et al.* A Case of Oseltamivir-resistant Pandemic Influenza (H1N1 2009) [in Korean]. *Infection and Chemotherapy*. Vol. 42, No. 2, April 2010. Available online: <http://www.icjournal.org/articles/view.php?code=ava&year=2010&vol=42&no=2&page=103>

Table 1: Geographical distribution of oseltamivir resistance by the WHO regions (as of 26 May 2010)

|                                          | WHO Region |      |      |      |       |      |
|------------------------------------------|------------|------|------|------|-------|------|
|                                          | AFRO       | EMRO | EURO | PAHO | SEARO | WPRO |
| Number of oseltamivir resistant isolates | 0          | 1    | 98   | 80   | 0     | 111  |

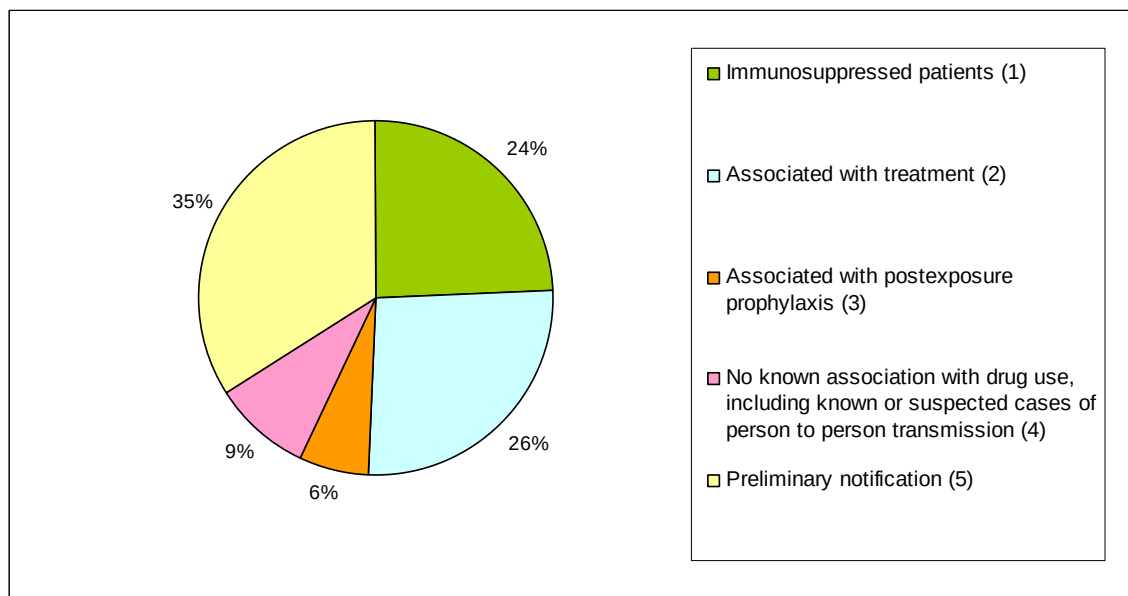


Figure 1: Proportion of the clinical background of reported cases of oseltamivir resistance (as of 26 May 2010). Cases are classified first by identifying those that occur in severely immunocompromised patients (1). The remaining cases are then classified as either occurring during or after oseltamivir treatment (2), associated with post-exposure prophylaxis (3), or occurring in patients who had not used antiviral drugs prior to occurrence of the resistant virus (4). The balance of cases (5) are those where insufficient clinical information is available.

<sup>1</sup> The totals reported here are based on confirmed reports from several sources, and include case reports published in medical journals, as well as reports from national ministries, health agencies and laboratories.

<sup>2</sup> WHO Euro region report a case of pandemic A(H1N1) 2009 virus that developed in an immunocompromised child with reduced susceptibility to zanamivir and oseltamivir due to an amino-acid mutation at position 223 in the neuraminidase. The clinical implications of this A(H1N1) 2009 variant are being assessed and a publication is expected. The report is available at [http://www.euroflu.org/cgi-files/bulletin\\_v2.cgi](http://www.euroflu.org/cgi-files/bulletin_v2.cgi)