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POSTER ☐

PLATFORM PRESENTATION ☒

MOBI-KIDS; study on communication technology, environment and brain tumours in young people

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Brain tumours are the second most common cancer type in young people. So far, little is known about the risk factors for brain tumours. Known risk factors include exposure to ionizing radiation, genetic predispositions often with a family history of brain tumours. There is also some evidence or speculation that exposure to chemicals and to electromagnetic fields may be associated with the risk of brain tumours. Recent years have seen a dramatic increase in the use of communication technologies, particularly among young people; hence, there is growing concern about their potential health effects. The MOBI-KIDS study aims to gain important insights into potential environmental risk factors that might increase the risk of brain tumours in young people. Special attention is given to the potential carcinogenic effects of radiofrequency fields from mobile phones.

An important limitation of studies on brain tumours in young people to date has been the limited number of cases included. Although the frequency of brain tumours has tended to increase in young people over recent decades, it is fortunately still a rare disease. The MOBI-KIDS study will enroll cases and controls in 13 countries - Austria, Australia, Canada, France, Germany, Greece, India, Israel, Italy, New Zealand, Spain, Taiwan, The Netherlands - which will be pooled afterwards to create the largest international database on potential risk factors for brain tumours in young people.

The MOBI-KIDS study is a hospital-based case-control study. Cases are 10-24 years old patients newly diagnosed with a brain tumour; controls are patients hospitalized for appendicitis. Controls will be individually matched to cases on age, gender and region of residence. An expected 2000 brain tumour cases will be included during the 2.5 to 3 year study period and twice as many controls.

An interview will be held with all participants and their parents to assess lifestyle, residential and school history, use of communication technologies, exposure to environmental risk factors, medical history and family history of cancer. Reported mobile phone use will be validated with phone records obtained from providers. Medical images will be reviewed by neuroradiologists in order to specify the location of the tumours. Several countries will also collect saliva from the participants for DNA isolation in order to study the potential link between the risk of brain tumours in young people and genes and gene-environment interactions. Brain tumor diagnosis will be validated by an international panel of neuropathologists.

Some countries have already started data collection, others will follow soon. Data collection is expected to end in mid-late 2013, depending on the country.

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