Overall update of I4C progress from Rockville 2005 to Oxford 2015

Terry Dwyer

Original rationale (2005)

- Little progress over last 30 years in finding preventable causes of childhood cancer

- Evidence base lacks prospective environmental data and there are no prospective biospecimens linked to childhood cancer available. It is essential to have such data to overcome concerns about recall bias and selection bias affecting case control data.

  Prospective biospecimens needed for aetiological insights.

- Minimum number of leukemia cases from pooled cohorts with relevant data and biospecimens needed to provide adequate power

  250

Number needed to study leukemia (Acute Lymphoblastic Leukemia & Acute Myeloid Leukemia)

Percentage of subjects exposed	Minimum risk detectable	Power %	Number of Participants Required	Number of leukemias
5	1.5	80	1180059	
15	**1.5**	**80**	**446633**	**250**
30	1.5	80	277781	

Estimated Population Attributable Risk = 7%

Garcia-Closas M, Lubin JH. *Am J Epidemiol.* 1999

Age-adjusted SEER cancer incidence rates USA 1975-2002

Progress towards obtaining adequate power

Accumulation of leukemia cases in I4C