

If you are seeing this message, you may be experiencing temporary network problems. Please wait a few minutes and refresh the page. If the problem persists, you may wish to report it to your local Network Manager.

It is also possible that your web browser is not configured or not able to display style sheets. In this case, although the visual presentation will be degraded, the site should continue to be functional. We recommend using the latest version of Microsoft or Mozilla web browser to help minimise these problems.

- [My Profile](#)
- [Log In](#)



International Journal of Cancer

Early View (Articles online in advance of print)

- Published Online: 22 Feb 2006
Copyright © 2006 Wiley-Liss, Inc., A Wiley Company
- [Save Title to My Profile](#)
 - [Set E-Mail Alert](#)



 Go to the homepage for this journal to access trials, sample copies, editorial and author information, news, and more. ▶

SEARCH All Content
Publication Titles

- [Advanced Search](#)
- [CrossRef / Google Search](#)
- [Acronym Finder](#)

SEARCH IN THIS TITLE

International Journal of Cancer

Enter words or phrases

< [Previous Abstract](#) | [Next Abstract](#) >

Select phrases [Abstract](#) | [References](#) | Full Text: [HTML](#) | [Related Articles](#) | [Citation Tracking](#)

Epidemiology

Childhood leukemia and magnetic fields in Japan: A case-control study of childhood leukemia and residential power-frequency magnetic fields in Japan

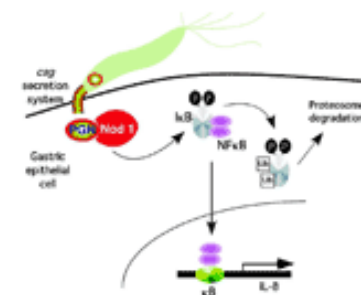
Michinori Kabuto^{1*}†, Hiroshi Nitta¹, Seiichiro Yamamoto², Naohito Yamaguchi³, Suminori Akiba⁴, Yasushi Honda⁵, Jun Hagihara⁶, Katsuo Isaka⁷, Tomohiro Saito⁸, Toshiyuki Ojima⁹, Yosikazu Nakamura⁹, Tetsuya Mizoue¹⁰, Satoko Ito¹¹, Akira Eboshida¹¹, Shin Yamazaki¹², Shigeru Sokejima¹², Yoshika Kurokawa¹, Osami Kubo³

SEARCH BY CITATION

Vol: Issue: Page:

NOW AVAILABLE

The Journal of Pathology Annual Review Issue 2006



Infection and Disease: Cause and Cure

[Read the abstracts now](#)

- 1 National Institute for Environmental Studies, Ibaraki, Japan
- 2 National Cancer Center, Tokyo, Japan
- 3 Tokyo Women's Medical University, Tokyo, Japan
- 4 Kagoshima University, Kagoshima, Japan
- 5 University of Tsukuba, Ibaraki, Japan
- 6 Miyagi University, Miyagi, Japan
- 7 Tokushima University, Tokushima, Japan
- 8 National Research Institute for Child Health and Development, Tokyo, Japan
- 9 Jichi Medical School, Tochigi, Japan
- 10 University of Occupational and Environmental Health, Fukuoka, Japan
- 11 Hiroshima University, Hiroshima, Japan
- 12 Kyoto University, Kyoto, Japan

email: Michinori Kabuto (kabuto@nies.go.jp)

* Correspondence to Michinori Kabuto, National Institute for Environmental Studies, 16-2 Onogawa, Tsukuba, Ibaraki, 305-8506, Japan

† Fax: +81-29-850-2571.

Funded by:

- Special Coordination Funds for Promoting Science and Technology from the Ministry of Education, Culture, Sports, Science and Technology for 1999-2001

Keywords

residential magnetic fields • childhood leukemia • population-based • case-control study • Japan

Abstract

Residential power-frequency magnetic fields (MFs) were labeled as a possible human carcinogen by the International Agency for Research on Cancer panel. In response to great public concern, the World Health Organization urged that further epidemiologic studies be conducted in high-exposure areas such as Japan. We conducted a population-based case-control study, which covered areas inhabited by 54% of Japanese children. We analyzed 312 case children (0-15 years old) newly diagnosed with acute lymphoblastic leukemia (ALL) or acute myelocytic leukemia (AML) in 1999-2001 (2.3 years) and 603 controls matched for gender, age and residential area. Weekly mean MF level was determined for the child's bedroom. MF measurements in each set of a case and controls were carried out as closely in time as possible to control for seasonal variation. We evaluated the association using conditional logistic regression models. The odds ratios for children whose bedrooms had MF levels of 0.4 μ T or higher compared with the reference category (MF levels below 0.1 μ T) was 2.6 (95% CI = 0.76-8.6) for AML + ALL and 4.7 (1.15-19.0) for ALL only. Controlling for some possible confounding factors did not alter the results appreciably. Even an analysis in which selection bias was maximized did not fully explain the association. Most of the leukemia cases in the highest exposure category had MF levels far above 0.4 μ T. Our results provided additional evidence that high MF exposure was associated with a higher risk of childhood leukemia, particularly of ALL. © 2006 Wiley-Liss, Inc.

Received: 28 September 2004; Accepted: 31 May 2005

Digital Object Identifier (DOI)

10.1002/ijc.21374 [About DOI](#)

IMPORTANT MESSAGE



Applications are invited for the position of Editor-In-Chief for the journal, Hematological Oncology

[For More Information?](#)

WIN A SONY VAIO LAPTOP!

March is Pay-Per-View Month!



Purchase a Pay-Per-View document on Wiley InterScience during the month of March 2006 and you will be automatically entered in our sweepstakes for your chance to win a SONY VAIO LAPTOP!

[Terms and conditions apply.](#)

No Purchase Required to Enter or Win

NOW AVAILABLE

The Journal of Pathology Backfile Collection (1892-1996)



Fully searchable and live-linked with current web content, this backfile brings the complete contents of this top-tier journal—dating back to Volume 1, Issue 1—to your desktop. A one-time fee delivers ongoing access with no strings attached.

[Find out more](#)

[Request a Quote](#)

Related Articles

- Find other [articles](#) like this in Wiley InterScience
- Find articles in Wiley InterScience written by any of the [authors](#)

Wiley InterScience is a member of CrossRef.



SIGN UP NOW



Get select content from some of Wiley's leading publications delivered to your PDA — free!

[Sign up now](#)

ARTICLE REPRINTS



Need an article reprint?

Paper or electronic reprints are available for all articles published on Wiley InterScience. Inquiries can be submitted online.

[Find out more](#)

ALSO OF INTEREST



Hematological Oncology

Hematological Oncology considers for publication articles dealing with experimental and clinical aspects of neoplastic diseases of the hemopoietic and lymphoid systems and relevant related matters.

[Sign up now!](#)

[About Wiley InterScience](#) | [About Wiley](#) | [Privacy](#) | [Terms & Conditions](#)

Copyright © 1999-2006 [John Wiley & Sons, Inc.](#) All Rights Reserved.