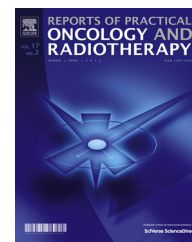


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Review

Cancer incidence and mortality in the Greater Poland Region—Analysis of the year 2010 and future trends

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ABSTRACT

Background and aim: The Greater Poland Region is one of the most industrialised areas of Poland, with a high rate of cancer incidence and mortality. The present report estimated incidence and mortality data for Greater Poland in the year 2010.

Methods: Statistical reports in this study include absolute number of cases and crude incidence rates. The derived age-, sex-, and site specific rates were age-standardised (ASRs per 100,000 person-years) using the European (ASRE) standard population.

Results: In 2010, a total 13,581 new cancer cases were reported to the Greater Poland Cancer Registry. The number of new cases increased by 24% compared to 2001. Greater Poland has the second-highest ASR for both females and males among the 16 regions in Poland. The most common cancers are similar to those in other Western European countries. Among men, the most common cancers are lung (C34), colorectal (C18-C21), and prostate (C61) cancer. In women, breast cancer is the most common (C50), followed by colon (C18-C21) and lung (C34) cancer. Lung cancer in males accounts for more than one-third of all cancer-related deaths in Greater Poland. As in 2009, lung cancer is the leading cause of death in women.

Conclusions: Given the ageing of the population, the incidence of chronic diseases, including cancer, is expected to grow. These data indicate that cancer will continue to represent an important challenge both to local health authorities and the National Health Fund, which will need to meet the growing demand for cancer care.

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1. Introduction

The incidence of cancer continues to rise in Europe as a consequence of population ageing, lifestyle choices (tobacco and alcohol use, physical inactivity, poor diet) and industrial contamination.¹ While the incidence of cancer varies from country to country, the incidence rates in Eastern Europe are generally higher than in those observed in Western Europe.^{1–5}

Treating cancer is an expensive proposition requiring sophisticated technology and costly chemotherapy agents and targeted drugs. The most cost-effective approach to cancer control is, therefore, not treatment, but rather early detection and prevention.⁶ Prevention, however, also requires surveillance through comprehensive cancer registries. Population-based registries provide valuable information on incidence rates and trends in those rates based on tumour localization, sex, and age. In addition, hospital-based registries provide information regarding diagnosis, stage distribution, treatment methods and survival.

The Greater Poland Region is the second largest province in Poland (29,825 km²) and the third most populous (3.4 million inhabitants). Greater Poland consists of 31 administrative districts and 4 cities (Kalisz, Konin, Leszno, Poznań) that function as their own district.⁷ Cancer surveillance in the region is carried out by the Greater Poland Cancer Registry (GPCR). The incidence to mortality (I/M) ratio—an indicator of accuracy—of the GPCR is 99%, thus making the GPCR among the most accurate cancer registries in Poland.

The aim of the present report is to provide and discuss data on cancer incidence in the Greater Poland Region for the year 2010.

2. Materials and methods

Data for this descriptive study was obtained from the GPCR. This cancer registry has been registering cancer cases in Poznań, Poland since 1980, and for the province since 1985.

The GPCR has been member of the International Association of Cancer Registries since 2008.⁴ According to the data from the National Cancer Registry for 2010, the GPCR, with a registration completeness of 99% (vs. a mean of 90% in Poland as a whole), registration quality of 85% (vs. 84%) is one of the highest-quality regional cancer registries in Poland. The GPCR includes data from 31 districts and 4 cities with “district rights”

(Kalisz, Konin, Leszno, Poznań). Since January 1, 2009, Death Certificate Statistical Cards—which provide essential information related to the patients cause of death—have been sent electronically from all registering points in the country only to a designated Statistical Office in Olsztyn. As a result, this comprehensive information is no longer sent directly to regional cancer registries.

Cancer registration is regulated by Polish law, including the June 29, 1995 law on public statistics (Journal of Laws, 1995, No. 88, item 439, as amended) and the Council of Ministers “Regulation of Statistical Surveys of the Public Statistics” (Journal of Laws of 2010, No. 3, item 14). All cancer registries in Poland collect data, which is reported on the official form entitled the “Cancer Notification Form”. All tumours are coded according to the 10th Revision of the International Classification of Diseases and Related Health Problems (ICD10). All malignancies with the codes C00–C97, and in situ neoplasms (D00–D09) are included in the registry.

Statistical reports in this study include absolute number of cases, crude incidence rates. The derived age-, sex-, and site specific rates were age-standardised (ASRs per 100,000 person-years) using the European (ASR_E) standard population. Females account for a majority of the population in the region, with a male:female ratio of 100:106.

3. Results

In 2010, 13,581 new cases of cancer were reported to the GPCR (6722 men and 6859 women). The number of new cases increased by 2655 (24%) compared to 2001 (see Table 1). The growth in cancer incidence increased proportionally by age group.

The most common cancers in men were lung (C34), prostate (C61), and colon (C18). In women, the most common locations were breast (C50), lung (C34), and corpus uteri (not cervix) (C54) (see Fig. 1).

The total number of all in situ cancers (D00–D09, pre-invasive, stage ‘0’) increased from 216 cases in 2005 to 183 cases in 2006, 278 in 2007, 308 in 2008, 327 in 2009, and 359 in the year 2010.

In 2010, 588 cancer cases (C00–D09) were identified by routine screening tests; this represents an increase of 227 (63%) more cases than in 2009. Of these, 510 (87%) were breast

Table 1 – Cancer incidence, Greater Poland, 2001–2010.

Year	Male			Female		
	Absolute number	Crude rate	ASR _E	Absolute number	Crude rate	ASR _E
2001	5367	330.8	395.26	5559	323.2	299.37
2002	5584	343.6	397.00	5616	326.0	292.60
2003	5749	353.4	405.33	5722	331.7	294.00
2004	5908	362.6	408.02	5770	333.9	294.53
2005	6340	388.5	409.52	6282	362.8	304.28
2006	6513	398.3	418.26	6178	356.1	296.91
2007	6749	412.0	421.51	6746	387.8	319.06
2008	7086	431.3	435.28	6714	384.8	309.49
2009	6964	422.4	419.77	6749	385.5	311.76
2010	6722	405.2	416.50	6859	389.6	324.27

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