

STATES OF JERSEY



RADON GAS LEVELS AND CANCER RATES IN JERSEY

Lodged au Greffe on 19th August 2011
by Deputy P.V.F. Le Claire of St. Helier

STATES GREFFE

PROPOSITION

THE STATES are asked to decide whether they are of opinion –

to request the Minister for Health and Social Services –

- (a) to conduct an updated study on radon gas levels in Jersey;
- (b) to undertake a campaign to increase public awareness of the dangers posed by radon gas (including where in Jersey the risks are greatest) and to set out what precautions can be taken, including the use of detectors;
- (c) to commission and publish an independent expert's report into why Jersey has the cancer rates that it does and, in particular, why those rates are higher for certain cancers than in the South West of England, with this study to include an epidemiological study of cancer incidence in Jersey, based on an audit over a defined period and an exploration of individuals' documented exposure to recognised risk factors.

DEPUTY P.V.F. LE CLAIRE OF ST. HELIER

REPORT

Background

When I was on the Health and Social Services Committee I vigorously pursued the argument that something had to be done to tackle the number of deaths and the overall harm that tobacco had upon our community. I am therefore proud of my part in the eventual approval by the States of the current Tobacco Strategy. The Tobacco Strategy has been hailed as the greatest single benefit to island health by the former Medical Officer of Health. However, it is instructive to recall that that strategy took a great deal of perseverance. It was not universally supported. Yet it has now had such a significant impact upon the lives of islanders.

This has been one of the clearest examples of investing in Jersey and shows the immediate benefits we can produce as legislators in achieving a better society in terms of health and life experience if we try to see beyond the brow of the hill.

Radon

There are many causes of cancer and our understanding in this area is evolving. Amongst one of the least publicly understood causes of death by cancer is that caused by radon gas that is released from certain geology. Radon is the second largest cause of lung cancer in the UK resulting in about 5% of all fatal lung cancers. It has been classified by the International Agency for Research on Cancer (part of the World Health Organisation), as a Group 1 Carcinogen. This means that there is direct evidence from studies of a link between exposure to radon and lung cancer. Radon is therefore in the same group of carcinogens as asbestos and tobacco smoke as a cause of lung cancer.

As radon decays it creates particles that can damage the cells lining the airways of the lung. This damage can lead to cancer and, as the lungs of smokers may have many cells that are already somewhat damaged, the extra risk from radon is much greater for them than it is for non-smokers.

The UK's National Radiological Protection Board (NRPB) has estimated around 100,000 properties in Britain are significantly affected by radon. In 2004 the NRPB reported concentrations of radon up to 85 times higher than recognised safety limits in 2 homes in Cornwall; an area that has a similar geology to Jersey. The geology map of Jersey is attached at the Appendix and is further explained below.

The risk from radon for people living in dwellings at the action level of 200 Bq/m³ is roughly 1 in 100. For smokers the risk from radon increases dramatically to 1 in 10. This means that if your home has a radon level of 200 Bq/m³ or higher, then you should seriously consider taking remedial action to reduce the household radon levels. It is worth noting that the action level in the USA is 150 Bq/m³ and it is anticipated that the EU recommended action level will be reduced to 100 Bq/m³ for homes and 300Bq/m³ for workplaces during the course of 2011.

A research conducted by Northampton University and published in July 2011 has reinforced fears as to the effects of radon and suggested that no more than 4 hours per month should be spent in potentially high level areas such as mines. This is the type of research that we in Jersey should actively be considering. There are many people in Jersey who may potentially be exposed to longer periods of radon than this, for

instance, in our War Tunnels (which further sometimes hosts events involving rehearsals and the performance itself) although I am unaware of any health and safety testing for radon having been conducted and published.

There have been studies on a small scale only conducted in Jersey but even these have shown some worrying features. The following is an extract from the States' website –

“There have been 4 surveys in Jersey.

Phase 1 survey

In the initial 1987 / 88 survey, 3 houses out of the 30 tested (10%) were above 200 Bq m³. The average reading from the 30 houses tested in the initial survey was 86 Bq m³. The objective of the phase 2 survey was to undertake further measurement in the 3 houses and to extend the survey to include nearby premises, or premises in similar geological areas, to determine if there was a problem, and if so, its extent.

Phase 2 survey

The radon concentrations were determined at 22 houses and 2 underground work places. In each of the dwellings selected, the average radon concentration was measured in a living area and the main bedroom for a period of just over 9 months. The detectors were supplied and subsequently analysed by the NRPB (National Radiological Protection Board; now part of the Health Protection Agency). The results from the phase 2 survey indicated that 8 of the 22 dwellings tested (36%) were above the current precautionary level. The average annual radon concentration of the 22 selected buildings was 140 Bq m³.

Phase 3, St Helier Town survey

This 3-month survey of St Helier houses and schools took place in 1992. The results indicate that all of the 24 houses were below the current precautionary Action Level of 200 Bq m³, and the average level was 61 Bq m³. Two of the dwellings were close to the Action Level and the occupiers of these were offered another free test in order to confirm the results. The 5 schools tested would be judged in the UK as occupational premises with regard to the Ionising Radiation Regulations which give a level of 400 Bq m³ at which detailed investigations would be required. The average level in the schools was 47 Bq m³, indicating no further measurements were required.

Phase 4 survey

In 1998 another radon survey for householders was completed. On the results so far, 12% of Jersey properties tested have been at or above the recommended action level of 200 Bq/m³. The areas in Jersey of concern are those on the granite boundaries / borders, especially where the boundary is with diorite (ie the boundaries of the orange areas on Jersey's geology map, which you can download below). Areas of possible higher levels are:

1. around the granite north-west shoulder of the Island

2. around the diorite boundary with granite throughout the south-east of the Island
3. possibly on the edge of the granite south west shoulder around Corbiere.”.

The studies that have been conducted in Jersey, therefore, were some time ago now and were on a small scale. We need to know more about the current risks of radon, the extent to which there remain problems in Jersey and the public made more aware of the dangers of radon. In this respect, I believe that only a small proportion of the general public have even heard of the word “radon” and even then the vast majority are ignorant of its significance and what they can do to test for this harmful gas or lessen its risks.

Modern building regulations mean that new buildings are less likely to suffer from radon but the vast majority of Jersey’s housing stock was not built to modern standards and remain a potential risk. Even then it is important to note that radon may also be present in water and drinking water quality is another area that in my view needs consideration in relation to this issue.

The States of Jersey has a page dedicated to radon at the following URL

<http://www.gov.je/Health/Environment/Pages/Radon.aspx>

Radon can also feature in water and together with nitrates and the need to ensure safe drinking water the States has a duty to ensure the public is informed and protected. I have been particularly concerned recently about radon and nitrates in drinking water and their effects and where and how this is being monitored and how the public is being protected from any potential harm. I have discussed the matter with the Minister for Planning and Environment and he has informed me that this is being looked at now especially in terms of nitrates. The details of this I hope can be drawn out by this debate and study also but in my view, they should be there now for all to see front and centre, not dragged out by propositions brought by back bench members, efforts. I hope that there can be a maturing of the States Environmental and Health Protection governance in the future and as per our pledge in relation to the Strategic Plan that we can be more open and transparent, where perhaps in the past there was a desire to do things quietly and I would hope that this area in particular can be drawn out immediately if there is a problem or a concern.

Cancer incidence in Jersey Generally

I set out below a recent answer to a question I posed about cancer in Jersey. I believe that the following illustrates the worrying levels of certain cancers in Jersey and the need for a proper investigation into the issues. I do not believe that (and it is very dangerous to assume) that high levels of cancer simply mean that we are good at detecting cancer. Lung cancer in particular is often symptomless until it is too late for the victim to be cured; death usually then occurring within a matter of a few years.

“WRITTEN QUESTION TO THE MINISTER FOR HEALTH AND SOCIAL SERVICES BY DEPUTY P.V.F. LE CLAIRE OF ST. HELIER

ANSWER TO BE TABLED ON TUESDAY 5th JULY 2011

Question

Could the Minister for Health and Social Services give the most current figures for each type of cancer in Jersey and also indicate the age brackets for each type of cancer? Does the Department maintain data on how the figures and age brackets compare with the UK and the neighbouring region of Normandy?

Answer

Cancer Information

Locally statistics on cancer incidence (the annual number of new cancers diagnosed) and cancer mortality (annual deaths) are maintained by the Health Intelligence Unit within HSSD. This data is collated and analysed to look at trends and compare with other areas where possible. Because of the small numbers for some cancers annual rates do vary from year to year so it can be difficult to get an accurate picture of what is happening.

Cancer Incidence

The statistics for incidence of new cancers in Jersey are contained within the regular reports produced for us by the UK South West Cancer Intelligence Service. The latest Channel Islands Cancer Registration Report 2010 covers the three year period 2005 - 2007 and is available on from:

<http://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=538>give link

This report showed that the main cancers diagnosed in Jersey in 2005-07 were non malignant skin cancer, lung cancer, breast cancer, prostate cancer, colorectal cancer, malignant melanoma and blood cancers (see p7 of report).

Table 1 summarises the information from this report for the 5 main malignant cancer types diagnosed in Jersey.

Table 1: Summary of the main malignant cancer types diagnosed in Jersey

Cancer site	Annual average no. of cancers diagnosed	Age Standardised Rate (ASR) per 100,000 2003-07	Rate compared with South West	By age group		
				0-19	20-64	65+
Breast (F)	65	113.5	low	0	46%	54%
Prostate (M)	74	146.2	high	0	28%	72%
Lung	61	55.7	high	0	29%	71%
Colorectal	51	43.4	ns	0	37%	63%
Skin Malig.Melanoma	35	34.3	high	3%	58%	39%

Data shows that 1% of all new cancers occurred in the under 20's, 40% in those aged 20-64 years and 59% in the over 65's. This is a similar pattern to Guernsey & the South West.

Analysis carried out by the South West Public Health Observatory over the years has shown that Jersey has rates of cancer roughly comparable with the mainland and Guernsey for colorectal cancer, gynaecological cancer, leukaemia and upper gastrointestinal cancer and, more recently, slightly lower for breast cancer incidence.

Incidence rates were significantly higher in Jersey than the South West for lung cancer, head & neck cancer, malignant skin melanoma, stomach cancer, prostate cancer and testicular cancer in 2005-07 (see p13 of the report for full details). However, the numbers for some of these cancers are low so the data must be treated with some caution.

Higher incidence rates are not always a bad thing. If an area has better systems in place to detect a certain cancer and/or specialists skilled in diagnosing that cancer then more people will be picked up with it. High incidence rates can indicate better detection of a cancer. Early detection of cancer can lead to better outcomes & cure.

The Health Intelligence Unit is working on finding reliable European data (including French regions) for further comparison. Such data is not always suitable for comparative purposes due to differences in the way it is collected, coded or analysed. For example French cancer incidence data is patchy across the various regions and does not cover all cases (unlike the UK & Jersey where almost 100% of cases are picked up by a robust cancer registration process).

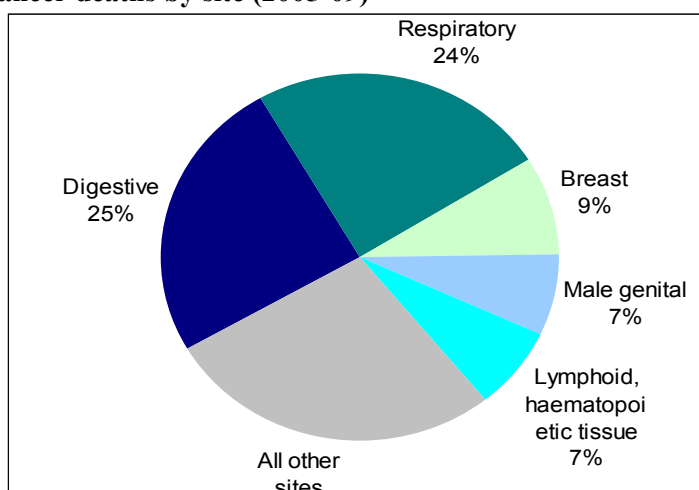
Cancer Mortality

Mortality data is collated and analysed annually by the HSSD's Health Intelligence Unit.

Jersey data shows that lung, upper gastrointestinal (oesophagus, stomach & pancreas) and colorectal cancers contribute to almost half of all cancer deaths in Jersey. This reflects world wide and European trends where lung cancer the single main cause of all cancer deaths.

Cancer of digestive organs (including upper gastrointestinal and colorectal cancers) accounts for a quarter of all Jersey deaths due to cancer. The second most common cause of cancer death is cancers of respiratory organs (mostly lung cancer) at 24%, followed by female breast cancers at 9% and male genital cancer (mostly prostate) at 7% (See Figure 1).

Figure 1: Jersey cancer deaths by site (2005-09)

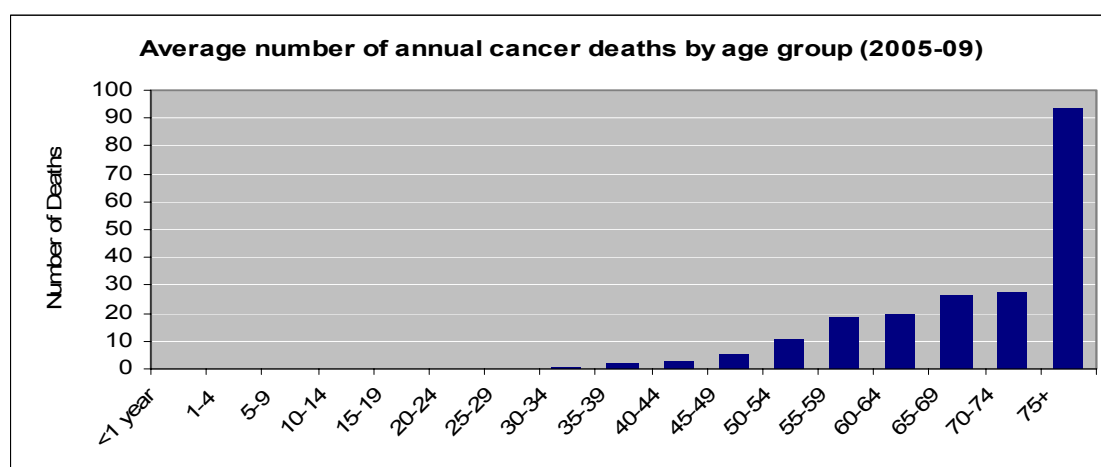


In terms of the age groups affected HSSD's Health Intelligence Unit maintains detailed spreadsheets for the main cancer sites by age group with data going back to 1996. This allows in depth analysis of individual cancers as required. From this we can show that nearly 60% of all cancer deaths in Jersey occur in those aged 70 or over and we have very few cancer deaths under aged 40 (Table 2).

Table 2: Jersey cancer deaths by age (2005-09)

Age group	Total (2005 – 2009)	Annual average no. of cancer deaths	Proportion of cancer deaths
under 20	3	1	0.3%
21-39	12	2	1.2%
40-59	185	37	17.9%
60-69	230	46	22.2%
70-79	296	59	28.6%
80+	309	62	29.8%

Figure 2: Cancer deaths by age group 2005 – 2009



Using Incidence & Mortality data

Ideally cancer incidence and cancer mortality should be looked at together.

A high incidence rate and an equally high mortality rate would indicate that that cancer was a particular problem, for example lung cancer.

But a high incidence rate can also be due to better diagnosis and detection of a cancer, and, if linked with lower mortality rates, indicate better treatment of those cancers, for example breast cancer.”

Financial and manpower implications

Health and Social Services have been working very closely in line with these issues and I am grateful for an explanation from the Medical Officer of Health and the Chief Executive Officer as to the implications. I am also grateful to the States Communications Unit and media team who have provided me with the costings. The overall costs of the study, expert's report together with a public awareness campaign will be in the region of £50,000. This funding will need to be found from within current Health budgets although I believe this would be a very cost effective use of funds when compared to the cost of treatment for a cancer patient as referred to below. It may be possible for such costs to be reduced, for instance by working with UK agencies and in particular Cancer Research and the UK agencies dealing with radon research.

I witnessed a documentary on revolutionary robotic cancer treatment this month. In the programme it identified that if a robot is used the likelihood of missing any cancer is almost eliminated. The programme said this investment although expensive pales in comparison when the returning costs of one cancer patient for additional surgery, treatment and care is on average £100,000 to the NHS.

£50,000.00 therefore will be money well spent in my view in addition to the work that Health and Social Services are doing and plan at this time in helping us fight this disease.

A national study in the UK is soon to be repeated and Jersey can take part in that with the additional benefits of a local study. We have an opportunity if we act now, to capture important statistical and clinical data that can help us reduce the number of cancer sufferers in Jersey in the near to long term.

With a public awareness campaign we can help islanders take steps to help themselves. This is an opportunity that will not present itself again for some time and I urge members to commit to supporting this important proposition with their votes and an extra commitment to Health and Social Services of this small amount of money to tackle a disease that touches so many lives in such terrible ways and leaves so many people utterly shaken and alone.

I ask members to stand with me and do something within their term of office, that once again can be recognised by our health professionals as a visionary step towards a healthier, more productive and caring society.

MAP OF RADON GEOLOGY FROM THE STATES OF JERSEY WEBSITE
WWW.GOV.JE

