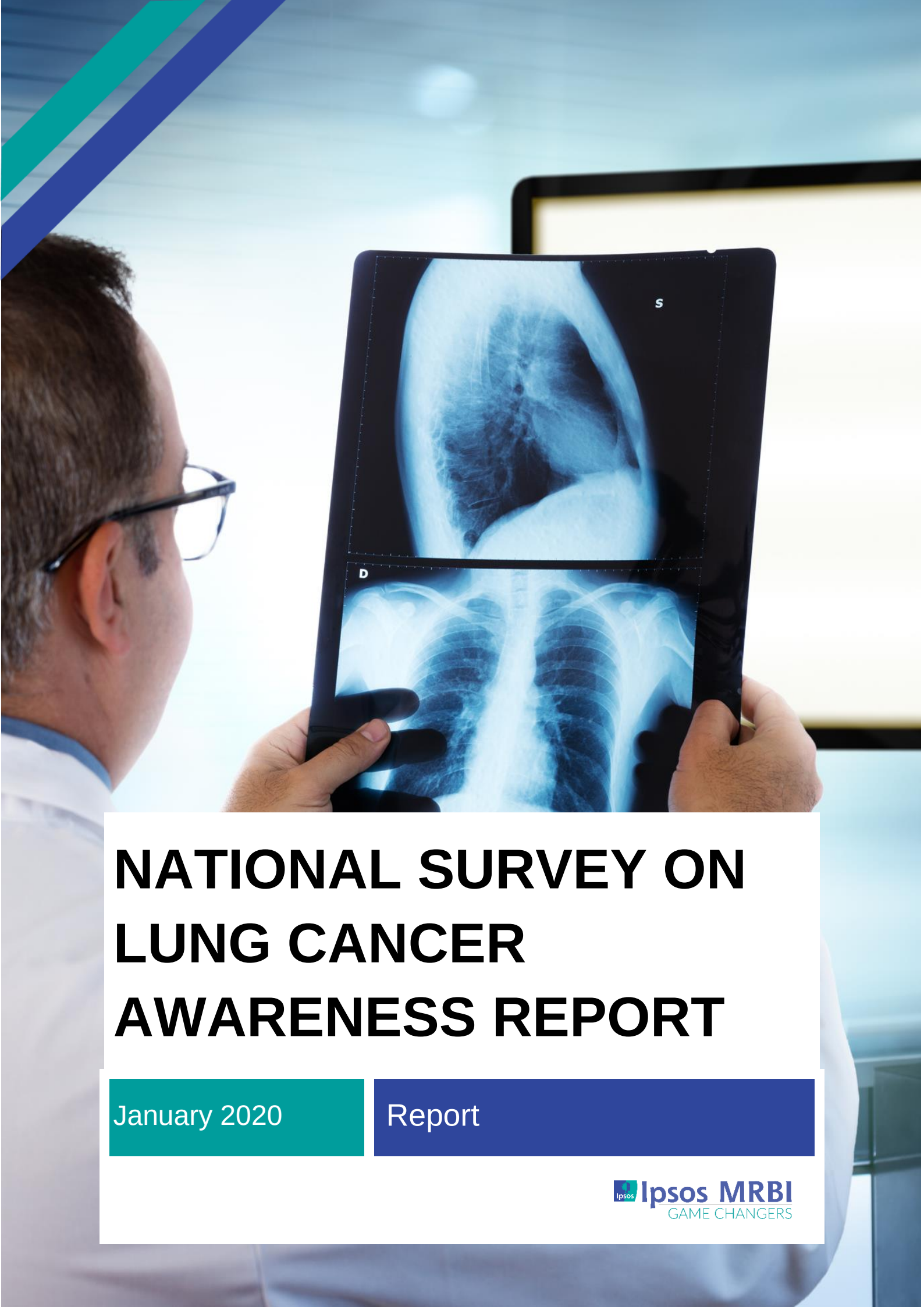

# NATIONAL SURVEY ON LUNG CANCER AWARENESS REPORT

January 2020

Report

Ipsos MRBI
GAME CHANGERS

# Legal notice

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# INTRODUCTION

This report details the key findings of a nationwide survey commissioned by the National Cancer Control Programme (NCCP) and carried out by Ipsos MRBI among those aged 50 and over in the population on the topic of lung cancer awareness.

The Irish National Cancer Strategy 2017 - 2026 (NCS) emphasises the importance of improving early detection of cancer in Ireland, recommending: *"The NCCP and the HSE Health & Wellbeing Directorate, in partnership with the voluntary sector, will develop a rolling programme of targeted multi-media based public awareness and education campaigns, aimed at the early detection of specific cancers and with particular focus on at-risk populations."*

The cornerstone of the NCS is the prevention of cancer. The first step is to work towards preventing lung cancer. However, for those who do develop lung cancer, early detection is key to improving survival rates. The aim of this research was to provide data that can inform the development of early detection interventions and communications to enhance health seeking behaviour for suspicious signs or symptoms of lung cancer.

The survey was conducted amongst those aged 50 and over living in Ireland in order to:

1. Establish current public awareness of the warning signs and symptoms of suspected lung cancer in this cohort

2. Assess health seeking behaviour and the barriers to seeking medical advice in this cohort

3. Establish public awareness of lifestyle risk and preventive factors for lung cancer in this cohort

4. Gain insight into the priorities for developing a national early detection of lung cancer intervention

Respondents were limited to those aged 50 and over as, according to figures from NCRI, 97% of lung cancers are diagnosed in this cohort. In order to reach a nationally representative sample of this age group, 750 telephone interviews were carried out with a randomly selected group of respondents in this age category.

In addition, it was required that a number of interviews were conducted in two areas of the country due to the higher instance of late stage lung cancer diagnosis and risk factor exposure in these areas. It was decided to carry these out as face-to-face interviews. 253 of these interviews were carried out throughout Co. Carlow and 251 were carried out in Dublin City, specifically in Dublin 7, Dublin 9 and Dublin 11. For ease of reference, these areas are referred to as “Target Areas” throughout this report.

These areas were chosen because of historical instances of lung cancer, the proportion of late stage diagnoses, the prevalence of underlying risk factors including deprivation levels, radon exposure and smoking rates, and to compare urban versus rural awareness.

The results of this survey can hopefully contribute to early detection interventions in the future and act as a baseline against which future activities can be measured. Improvements in overall lung cancer survival rates in Ireland will require an emphasis on increasing the proportion of patients diagnosed at an earlier stage of their disease and research such as this ensures that the best data is available for the NCCP to build towards this and further limit the impact of cancer on the population of Ireland.

Percentages throughout this report may not sum to 100% and “net” figures may not sum to the total of their constituent elements. This is due to individual figures being rounded to whole percentages.

# SURVEY METHODS AND TECHNICAL OVERVIEW

This survey was conducted by Ipsos MRBI using interviewer-administered questionnaires among a sample of the public aged 50 and over. These were split between 750 interviews conducted by telephone amongst a randomly selected sample of people within this age group and 504 face-to-face interviews conducted in the whole of County Carlow and three areas of Dublin City (Dublin 7, Dublin 9 and Dublin 11).

## *Questionnaire Design*

The questionnaire was designed by the NCCP utilising international validated questionnaires in consultation with Ipsos MRBI. The survey was developed using the "Lung Cancer Awareness Measure"[1] and the "Awareness and Beliefs about Cancer Measure"[2].

This questionnaire was intended to gain accurate and relevant information from the desired population and maximise survey participation. The questions were designed to provide information that can help guide future early detection of cancer interventions for the NCCP.

Cancer can be a sensitive or difficult topic to discuss so consideration was put into wording the questions in such a way as to not cause any unnecessary stress among respondents. Consideration was also given to ensuring that the resulting data would be comparable to other relevant national and international data sources.

## *Sample Design*

The specifics of the desired sample in this survey required two separate approaches to sample selection.

Firstly, 750 interviews were to be conducted among a representative sample of those aged 50 and over in Ireland. It was decided that a telephone approach would be the most appropriate way to conduct a survey of this nature in order to ensure that data are representative, valid, reliable and with minimal bias.

In order to be compatible with scientific principles the research needed to be built around a random sampling. The alternative, quota-based sampling, is not compatible with the scientific principles required of this survey. A randomly drawn sample is one in which every member of the defined population (in this case, those aged 50 and over) has a calculable chance of being included in the sample.

[1] This survey instrument (Lung CAM) was developed by University College London and Cancer Research UK. It is based on a generic CAM developed by Cancer Research UK, University College London, Kings College London and Oxford University in 2007-08

[2] Simon AE, Forbes LJL, Boniface D, et al. An international measure of awareness and beliefs about cancer: development and testing of the ABC. BMJ Open 2012;2:e001758. doi:10.1136/bmjopen-2012-001758

The telephone surveying involved a random digit dialling approach with a minimum of three attempts made to achieve an interview with each telephone number before it was deemed as unsuccessful. This maximises the chances of more difficult-to-reach audiences being included, rather than simply those most likely to answer the phone. A national sample of potential residential telephone numbers (both mobile and landline) was generated using Random Digit Dialling (RDD). The RDD sampling methodology involves generating a random selection of national telephone numbers using known number stems issued by ComReg.

All of these numbers were contacted by interviewers in the Ipsos MRBI CATI (Computer Assisted Telephone Interviewing) centre in Dublin. Ineligible numbers (for example, households in which all occupants are aged under 50, and businesses) were excluded once the interviewer had established their ineligibility.

A number of response rate maximisation techniques were used in order to minimise likely biases that arise through low participation rates.

These included:

- Allowing the phone to ring for at least 15-20 seconds before stopping the call to maximise the likelihood of the call being answered. Most voicemail systems will kick in prior to this in any case.
- If no answer, the number was not called again for a period of time to allow for the number to come up again for dialling on a different day/time of day.
- Appointments were re-scheduled as many times as necessary with respondent consent.
- Interviewing shifts that span morning/afternoons/evenings, as well as both weekdays and weekends.

If the selected number was a mobile number, then the individual who answered the phone (assuming they were aged 50 and over) was asked to complete the survey. If the selected number was a landline number, then the interviewer was required to make a selection.

In cases where only one person living in the household was aged 50 and over, this individual was requested to complete the survey. However, in cases of multiple individuals aged 50 and over (e.g. a co-habiting couple) the interviewer identified all individuals residing there and a computer algorithm was used to randomly select one of these individuals to complete the survey. To maintain the principles of random-selection, this is the only individual in that household who could complete the survey, and, if necessary, multiple attempts would be made to contact them.

As well as this telephone approach, it was also required to conduct a separate sample of those aged 50 and over in specific urban and rural locations. The areas chosen were split between Dublin 7, Dublin 9 and Dublin 11 and the whole of Co. Carlow, where statistics show higher historical rates of lung cancer incidence, late stage diagnosis and risk factor exposure.

As a mobile number has no geographical identifiers, creating a telephone booster sample targeted to a particular geographic area is very resource intensive involving a high degree of wastage of telephone numbers. Mobile-only households would most likely be excluded from this survey, creating a bias towards established and more affluent households.

It was agreed that a face-to-face approach was a much more efficient and reliable way to target this sample group. Interviewers were provided with maps to work within defined areas and recruited respondents through using a random walk approach (so that households are selected randomly), and random selection of an individual aged 50 and over within the household (so that respondents are selected randomly). This maintained the integrity of the scientific nature of random selection.

All interviewing was conducted using tablets with CAPI software so that the survey script was consistent with that used for the telephone interviewing in order to facilitate combining the data from both the telephone and face-to-face surveys.

## *Interviewer Briefing and Training*

Ipsos MRBI's interviewers, both telephone and face-to-face, have extensive experience in conducting similar projects. Ongoing training is required to maintain high quality standards, however, and every interviewer on this survey was briefed fully by relevant members of the Ipsos MRBI research team on the questionnaire and the best way to maximise response rates while also gathering relevant and usable data. Given the sensitive nature of cancer as a topic, two half-day sensitivity training sessions were provided for interviewers, carried out by the Irish Hospice Foundation.

Many respondents may have had experience with cancer either personally or through friends and family. Interviewers were trained in how to approach respondents with the appropriate tone, how best to deal with respondents who had an emotional reaction to questioning and where to direct respondents if they had any concerns. Respondents were reassured that they had been chosen at random and care was taken to ensure that interviewers were particularly attentive to the needs of respondents and actively listened to their answers. Care was also given to ensure that interviewers themselves were able to cope with any potential stress they may experience in the course of interviewing.

## Survey Fieldwork

Survey fieldwork was completed between August and October 2019. In total 750 telephone interviews were completed nationwide and 504 face-to-face interviews, 251 in Dublin and 253 in Carlow. The specific nature of the target sample meant that many potential respondents had to be discounted due to falling under the age limit required. However, among those aged 50 and over that we contacted, participation rates were reported as being high, showing the interest respondents had in the topic at hand.

In terms of validation, 10% of completed face-to-face interviews were back-checked and 10% of telephone surveys were monitored by a supervisor while they were in progress. This was applied to ensure that the interviewers have conducted the interviews professionally and in line with survey specifications.

## Data Cleaning and Validation

As the survey was conducted through a mixture of CATI (Computer Assisted Telephone Interviewing) and CAPI (Computer Assisted Personal Interviewing), the survey routing and many of the survey logic checks were automated and completed during fieldwork. This minimised the extent of data cleaning that was required post-fieldwork. However, extensive data checking was conducted following data collection and appropriate editing and data coding were conducted to ensure the accuracy of the final dataset.

## Data Weighting

Whilst the sampling process is designed to deliver a representative sample of individuals aged 50 and over throughout the country, differential response levels means that the survey sample is not a fully accurate representation of the population. As such, the aim of survey weighting is to bring the profile of respondents in line with the population profile. Survey non-response can cause bias if the individuals who do not participate are systematically different to the individuals who take part.

Non-response adjustments were made using known population statistics published by the Central Statistics Office. The variables used in this respect were: age by gender, education, work status of the respondent, and region.

## Survey Representation

This survey is designed to be representative of the population of Ireland aged 50 and over. Extensive efforts are made to maximise response rates across population groups and minimise any non-response bias. Additionally, the application of population weights to the survey data ensures that the survey sample is aligned with the profile of the general population in this age group.

## Data Reporting

This report provides a summary of the key findings of this survey. Throughout this report, the results of the telephone survey will be referred to as "National" figures and respondents of the face-to-face survey will be referred to as those in "Target Areas". Any reference to Dublin or Carlow throughout refers to the face-to-face interviews conducted in these areas and does not include respondents from the national sample who live in these areas.

The total number of respondents in the national sample was 750. The total number in target areas was 504. Among the target areas, 251 respondents were in Dublin and 253 respondents were in Carlow. These are the base figures for all tables in this report.

| | National | Target Areas | Dublin | Carlow |
|---|---|---|---|---|
| **Total Number of Respondents** | 750 | 504 | 251 | 253 |

## Margins of Error

Illustrative margins of error for sample sizes relevant to this survey are shown in the table below. The margins of error differ depending on the sample size and survey result.

| | A result of… | | |
|---|---|---|---|
| **Sample Size** | **10% or 90%** | **30% or 70%** | **50%** |
| **750** | 2% | 3% | 4% |
| **500** | 3% | 4% | 4% |
| **250** | 4% | 6% | 6% |

# SUMMARY OF KEY FINDINGS

- 16% of respondents nationally reported having had cancer themselves. 9% had a partner who had experienced cancer, 26% had a close friend and 63% had a close family member. In target areas 12% reported having had cancer themselves, 11% a partner, 57% a close friend and 67% a close family member.

- When asked to identify symptoms of lung cancer, the most common responses nationally were: coughing or a persistent cough (51%), shortness of breath or breathing difficulties (50%), coughing up blood (23%), tiredness (10%), weight loss or loss of appetite, and chest pains (both at 9%). These were broadly the same in target areas.

- Nationally, 17% of respondents were either not sure or unable to identify a warning or symptom of cancer. 21% identified one symptom, 29% identified 2 symptoms and 32% were able to identify 3 or more.

- When presented with a list of actual symptoms, the most commonly recognised ones nationally were coughing up blood (96%), worsening or change in an existing cough (93%), painful cough (92%), and unexplained weight loss (90%). The symptoms with the lowest level of awareness were changes in the shape of fingers or nails (20%) and persistent shoulder pain (42%). Nationally, respondents recognised an average of 10.6 symptoms out of the 14 named. In target areas respondents recognised 10.1 on average.

- Respondents in target areas were less likely to recognise individual symptoms. The most commonly recognised symptoms among these respondents were coughing up blood (91%), worsening or change in an existing cough (87%), and a painful cough (86%).

- When asked to identify risk factors that could cause lung cancer, the most common responses nationally were smoking (90%), working environment (25%), hereditary/genetic factors (14%), and toxic chemicals, air pollution and asbestos (all 13%). Responses in target areas were broadly similar although respondents were less likely to identify working environment as a factor (12%).

- When presented with a list of factors that may affect chances of developing cancer, the most commonly agreed upon factors nationally were being a smoker (98%), exposure to chemicals like asbestos (97%) and exposure to another persons' cigarette smoke (90%). Those in target areas were less likely on average to agree on each risk factor.

- 35% of respondents nationally said they would either be not very or not at all confident they would notice a symptom of lung cancer. This figure was 40% in target areas.

- 47% of respondents nationally said they would go to a doctor as soon as they noticed a symptom of cancer, however 21% said they would wait more than 2 weeks. In target areas 24% said they would go as soon as they noticed and 24% would wait more than 2 weeks.

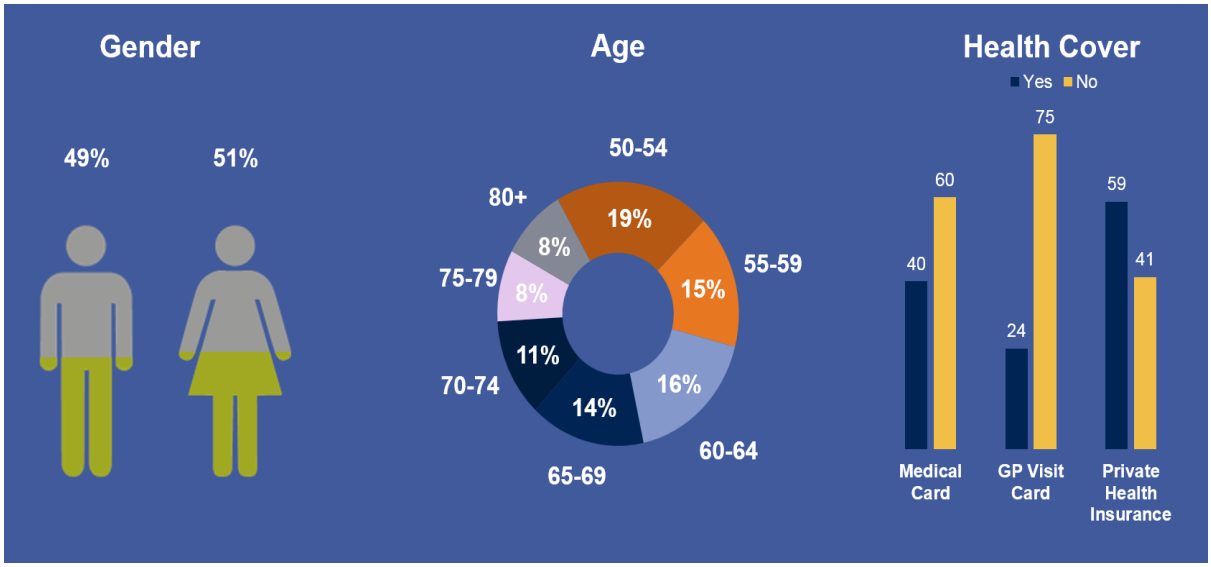
- Nationally, the most commonly stated reasons for reluctance to see a doctor were being worried what the doctor might find (30%) and being too busy (23%). The equivalent proportions in target areas were 41% and 15% respectively.

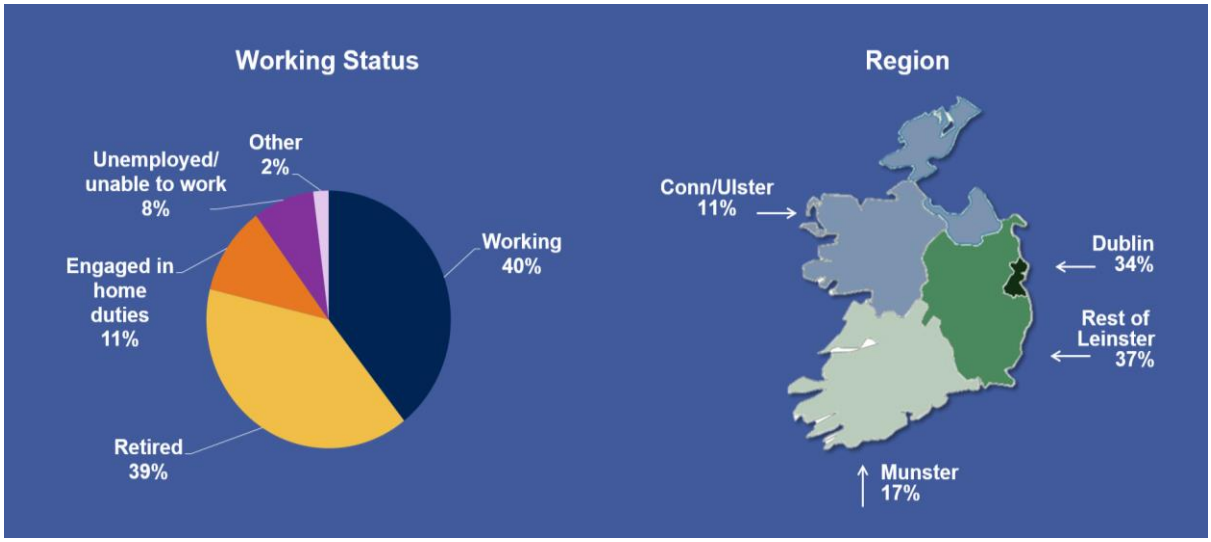
- 98% of respondents nationally agreed that going to the doctor as quickly as possible after noticing a symptom of cancer could increase the chances of surviving and 89% agreed that these days many people can expect to continue with normal activities and responsibilities. These figures were 94% and 86% respectively in target areas.

- Nationally, 14% of respondents reported that they would not want to know if they had cancer. 28% of respondents in target areas reported this.

# PROFILE OF SURVEY RESPONDENTS

## Total Respondents (National plus Target Areas):



### Gender

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Male** | 48% | 48% | 46% | 49% |
| **Female** | 52% | 52% | 54% | 51% |

### Age

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **50-54** | 20% | 21% | 21% | 21% |
| **55-59** | 19% | 15% | 15% | 16% |
| **60-64** | 16% | 19% | 18% | 20% |
| **65-69** | 16% | 13% | 11% | 14% |
| **70-74** | 10% | 12% | 13% | 11% |
| **75-79** | 12% | 9% | 9% | 9% |
| **80+** | 7% | 11% | 13% | 9% |

### Working Status

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Working** | 44% | 33% | 35% | 32% |
| **Retired** | 40% | 37% | 36% | 38% |
| **Engaged in home duties** | 6% | 19% | 20% | 18% |
| **Unemployed** | 3% | 5% | 4% | 6% |
| **Unable to work due to sickness or disability** | 6% | 4% | 5% | 4% |
| **Other** | * | * | * | 1% |
| **DK/Refused** | 1% | * | * | 1% |

### Health Cover

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Medical Card** | 40% | 55% | 52% | 59% |
| **GP Visit Card** | 24% | 28% | 32% | 25% |
| **Private Health Insurance** | 59% | 34% | 35% | 33% |

# AWARENESS OF WARNING SIGNS

In order to aid early detection of lung cancer, improving public awareness and behaviours to warning signs and symptoms is vital. A number of questions were asked of respondents in this survey to identify how high awareness is among the defined age group and if there are any gaps in the public knowledge that can be addressed in future.

In order to ascertain general awareness of symptoms of lung cancer, respondents were asked to name as many symptoms or warning signs of lung cancer as they could think of. Asking an unprompted, open-ended question like this gives an impression of what comes to mind first when people think of symptoms of lung cancer.

Nationally, 17% of respondents were either not sure or unable to identify a warning or symptom of cancer. 21% identified one symptom, 29% identified 2 symptoms, 21% identified 3 symptoms and 11% identified 4 or more symptoms.

***Table 1: There are many warning signs and symptoms of lung cancer. Please name as many as you can think of.***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Coughing/Persistent cough/ cough that won't go away** | 51% | 54% | 39% | 69% |
| **Shortness of breath/ breathing difficulties** | 50% | 46% | 35% | 56% |
| **Coughing up blood** | 23% | 27% | 26% | 27% |
| **Tiredness** | 10% | 11% | 5% | 16% |
| **Weight loss** | 9% | 13% | 13% | 13% |
| **Chest pain/ pain in lungs** | 9% | 9% | 6% | 12% |
| **General pain/ discomfort** | 6% | 5% | 6% | 5% |
| **Back pain** | 3% | 6% | 5% | 6% |
| **Infection/ Chest Infection** | 3% | 3% | 2% | 5% |
| **Mucus/ phlegm/ fluid in lungs** | 3% | 2% | * | 3% |
| **General poor health/ feeling unwell** | 3% | 2% | 1% | 2% |
| **Paleness/ skin colour change** | 3% | 1% | - | 2% |
| **Smoking** | 3% | 10% | 15% | 5% |
| **Hoarseness/ change in voice** | 2% | 2% | 2% | 3% |
| **Physical Weakness** | 2% | 1% | * | 1% |
| **Pneumonia/ cold/ flu symptoms** | 1% | 2% | 1% | 2% |
| **Lumps** | 1% | 1% | 1% | 1% |
| **Shoulder Pain** | 1% | 1% | 1% | 1% |
| **Sore Throat** | 1% | * | 1% | * |
| **Emphysema** | 1% | * | * | * |
| **Other** | 3% | 2% | 3% | 1% |
| **DK/Refused** | 17% | 7% | 8% | 5% |

***Less than 1% not shown***

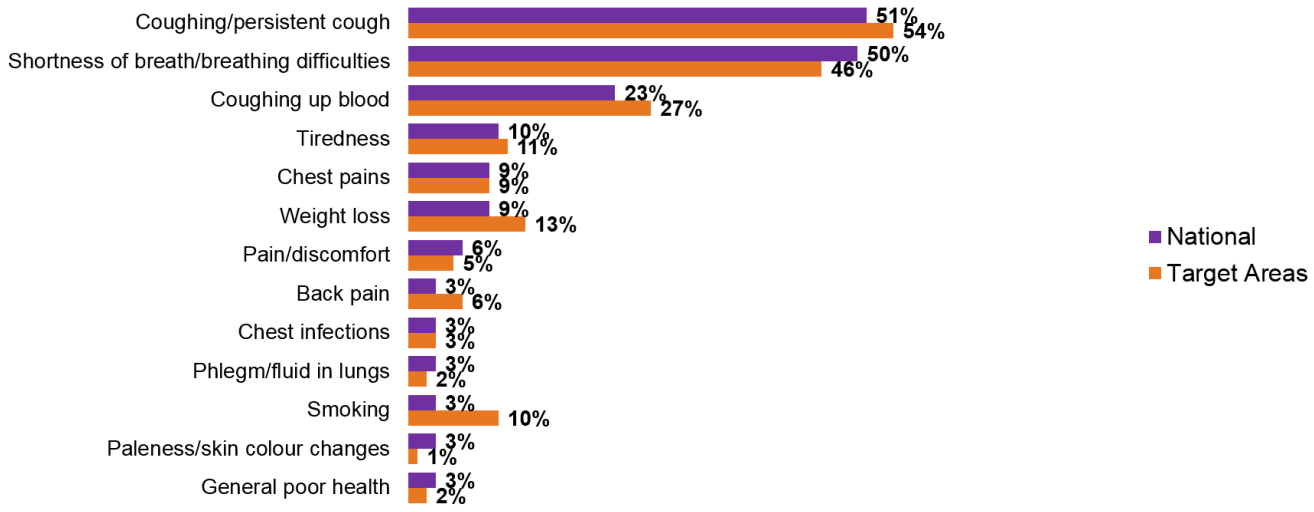
This question identified that the most commonly identified symptoms nationally were coughing or persistent cough (51%), shortness of breath or breathing difficulties (50%) and coughing up blood (23%). These symptoms all relate to the functioning of the lungs so it is perhaps unsurprising that respondents would be more likely to identify these as symptoms. The next most commonly identified symptoms were tiredness (10%), weight loss (9%), chest pain (9%) and general pain or discomfort (6%). All other symptoms were mentioned by 3% or less of respondents nationally.

In target areas the most commonly identified symptoms were broadly similar. Those in target areas were twice as likely to identify back pain as a symptom than those nationally (6% and 3% respectively) and were more likely to identify weight loss at 13% compared to 9% nationally.

Those in target areas of Carlow were more likely to identify most symptoms than those in target areas of Dublin. For example, 16% of those in Carlow mentioned tiredness as a symptom compared to 5% of those in Dublin.

There were some actual symptoms of lung cancer that were identified by only a small number of respondents. For example, 1% nationally identified shoulder pain and persistent chest infections were identified by 3%. These figures were the same in target areas. The large gap between the most identified symptoms and the rest suggests that most respondents readily associated one or two symptoms with lung cancer, but some found it more difficult to think of many beyond this.

***Figure 1: Warning Signs Of Lung Cancer Identified***



After asking respondents what symptoms came to mind first when thinking about lung cancer, they were then presented with a list of actual symptoms to identify if they were aware of each as a warning sign. Nationally respondents were, on average, aware of 10.6 of the 14 symptoms asked about. Those in target areas were able to name slightly fewer than the national average, at 10.1.

***Table 2: The following may or may not be warning signs for lung cancer. We are interested in your opinion. Do you think...?***

***Unexplained weight loss could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 90% | 77% | 77% | 78% |
| **No** | 8% | 10% | 12% | 8% |
| **Don't know** | 2% | 13% | 12% | 14% |

***That a persistent chest infection lasting 3 weeks or longer could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 84% | 79% | 76% | 83% |
| **No** | 12% | 11% | 14% | 7% |
| **Don't know** | 4% | 10% | 10% | 10% |

***That a cough that does not go away for two or three weeks could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 82% | 80% | 76% | 84% |
| **No** | 15% | 12% | 16% | 7% |
| **Don't know** | 3% | 8% | 8% | 9% |

***That persistent shortness of breath could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 85% | 84% | 79% | 88% |
| **No** | 12% | 9% | 14% | 5% |
| **Don't know** | 3% | 7% | 7% | 7% |

***That persistent tiredness or lack of energy could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 82% | 75% | 72% | 79% |
| **No** | 14% | 12% | 16% | 9% |
| **Don't know** | 4% | 12% | 12% | 12% |

***That persistent chest pain could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 63% | 66% | 66% | 67% |
| **No** | 32% | 18% | 22% | 15% |
| **Don't know** | 4% | 15% | 12% | 18% |

***That persistent shoulder pain could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 42% | 43% | 49% | 38% |
| **No** | 47% | 31% | 31% | 31% |
| **Don't know** | 12% | 26% | 30% | 31% |

***That coughing up blood could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 96% | 91% | 90% | 93% |
| **No** | 3% | 4% | 5% | 2% |
| **Don't know** | 1% | 5% | 5% | 4% |

***That an ache or pain when breathing could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 85% | 82% | 79% | 85% |
| **No** | 11% | 9% | 13% | 5% |
| **Don't know** | 4% | 8% | 7% | 9% |

***That loss of appetite could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 69% | 67% | 68% | 85% |
| **No** | 24% | 17% | 20% | 5% |
| **Don't know** | 6% | 16% | 12% | 9% |

***That a painful cough could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 92% | 86% | 87% | 86% |
| **No** | 6% | 7% | 8% | 6% |
| **Don't know** | 2% | 7% | 5% | 8% |

***That changes in the shape of your fingers or nails could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 20% | 26% | 32% | 20% |
| **No** | 59% | 33% | 33% | 33% |
| **Don't know** | 21% | 41% | 35% | 47% |

***That developing an unexplained loud high pitched sound when breathing could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 74% | 69% | 69% | 69% |
| **No** | 20% | 14% | 17% | 12% |
| **Don't know** | 6% | 17% | 14% | 19% |

***That worsening or change in an existing cough could be a sign of lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Yes** | 93% | 87% | 88% | 85% |
| **No** | 5% | 5% | 5% | 5% |
| **Don't know** | 2% | 9% | 7% | 10% |

***Table 3: Average number of symptoms identified***

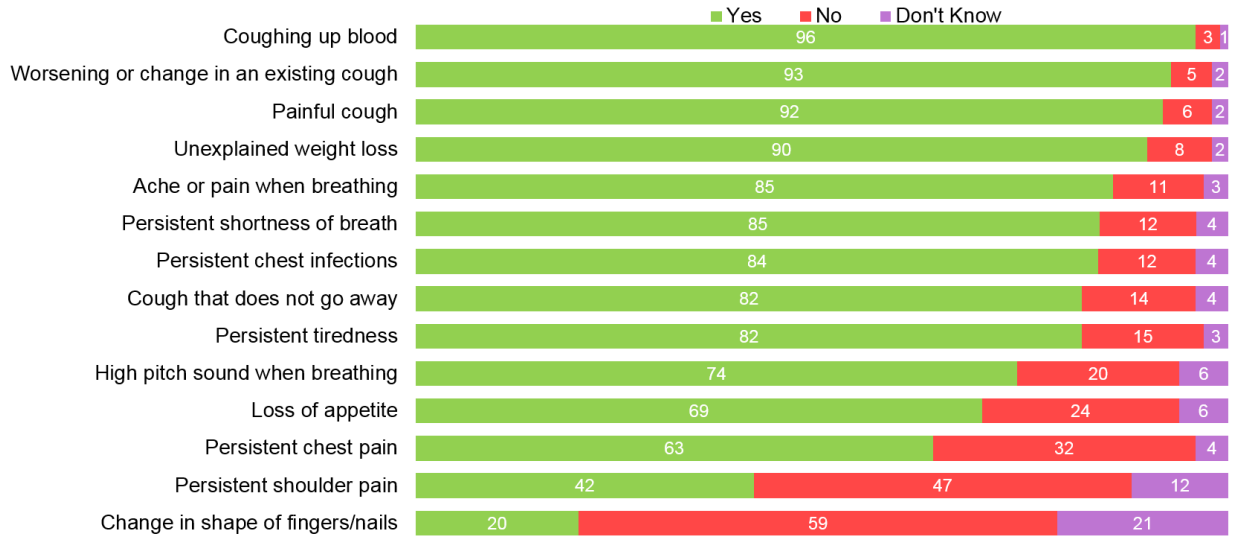
| National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|
| 10.6 | 10.1 | 10.1 | 10.2 |

The most commonly recognised warning signs nationally were coughing up blood (96%), worsening or change in an existing cough (93%) and a painful cough (92%). Given that coughing was the most commonly identified symptom by respondents earlier, this is perhaps unsurprising. Most of the other symptoms mentioned were recognised by a majority of respondents.

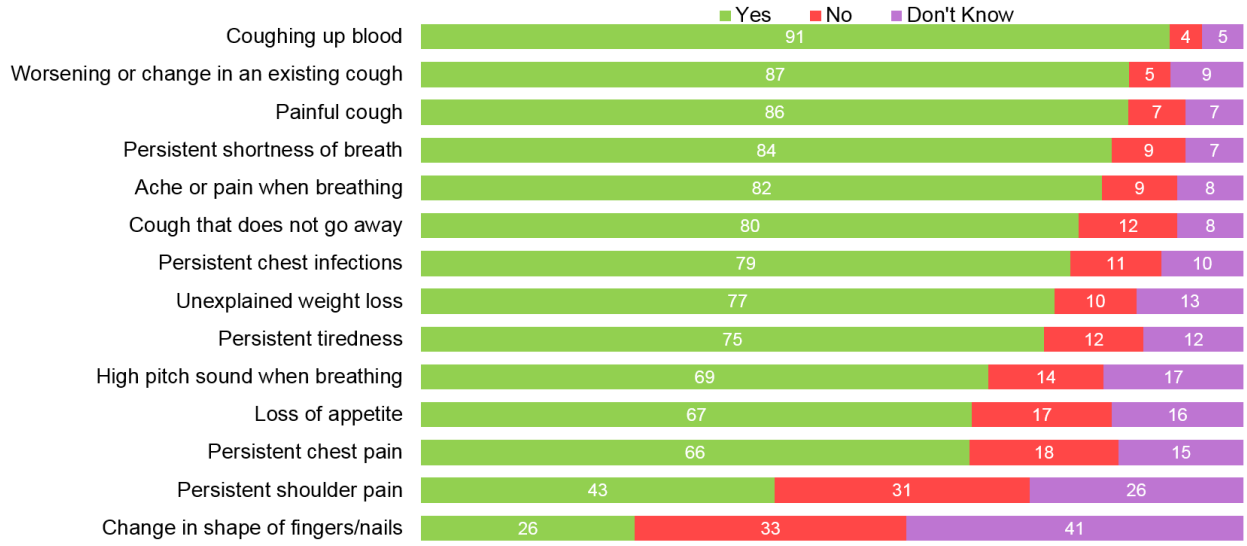
There were only two symptoms that a majority of respondents were not aware of; persistent shoulder pain (42%) and changes in the shape of your fingers or nails (20%). Those in target areas of Dublin were more likely to be aware of these symptoms, at 49% and 32% respectively, despite showing lower levels of awareness than the national average on many other symptoms.

Respondents in target areas were generally less likely to be aware of symptoms with the most notable example being unexplained weight loss, which 77% of respondents in target areas were aware of compared to 90% nationally.

***Figure 2: Awareness Of Warning Signs - National***



## *Figure 3: Awareness Of Warning Signs – Target Areas*



# AWARENESS OF RISK FACTORS

After being asked to identify potential symptoms of lung cancer, respondents were then asked to identify risk factors that may increase the chances of developing lung cancer. This was again asked as an open-ended question to gauge which factors came to mind first for respondents. Unsurprisingly, given it is by far the biggest risk factor, the most common answer given here was smoking at 90%. Mentions of other risk factors were more sporadic.

***Table 4: What things do you think affect a person's chance of developing lung cancer?***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **Smoking** | 90% | 89% | 89% | 90% |
| **Working Environment** | 25% | 12% | 6% | 17% |
| **Hereditary/Genetic Factors** | 14% | 6% | 5% | 7% |
| **Air Pollution** | 13% | 14% | 12% | 17% |
| **Chemicals/Toxic Chemicals** | 13% | 14% | 6% | 22% |
| **Asbestos** | 13% | 12% | 5% | 18% |
| **Second Hand Smoke** | 11% | 8% | 8% | 8% |
| **Drinking Alcohol** | 10% | 8% | 8% | 8% |
| **Environmental Factors** | 9% | 8% | 5% | 12% |
| **Poor Diet** | 9% | 7% | 6% | 8% |
| **Inhaling Dust** | 9% | 4% | 2% | 6% |
| **Lifestyle** | 5% | 2% | 4% | 1% |
| **Previous cancer/ other illness** | 4% | 3% | 2% | 3% |
| **Obesity/Overweight** | 3% | 1% | * | 2% |
| **Pollution (Unspecified)** | 3% | 6% | 7% | 4% |
| **Vaping** | 2% | 1% | 1% | 1% |
| **Lack of exercise** | 2% | 2% | 2% | 2% |
| **Drugs** | 1% | 2% | 2% | 1% |
| **Stress** | 1% | 2% | 2% | 3% |
| **Radon Gas** | 1% | 1% | 1% | 1% |
| **Other** | 1% | 1% | * | 1% |
| **DK/Refused** | 4% | 4% | 6% | 2% |

***Less than 1% not shown***

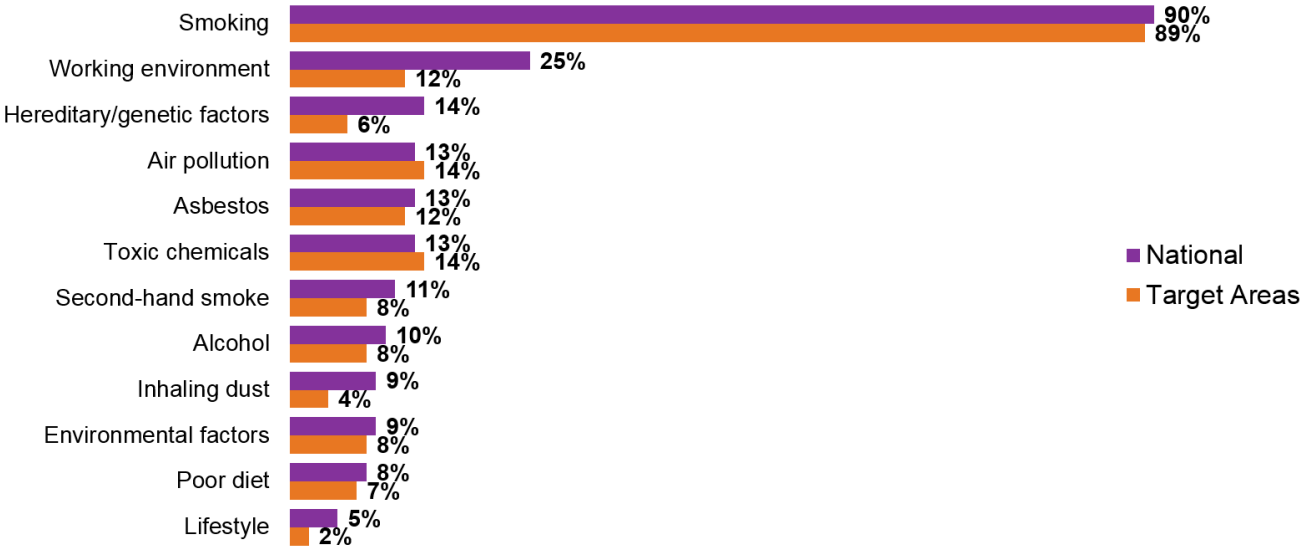
Apart from smoking, the most commonly mentioned risk factors nationally were working environment (25%), hereditary or genetic factors (14%), air pollution (13%), toxic chemicals (13%), asbestos (13%), second hand smoke (11%) and alcohol (10%). All other risk factors were identified by less than 10% of the population.

There was no significant difference between those in the national sample and responses given by those in target areas, although those in target areas were less likely to mention hereditary factors, at 6% compared to 14% nationally, and also less likely to mention working environment, at 12% compared to 25% nationally. Only 6% of those in target areas of Dublin identified working environment as a risk factor.

Nationally, men were more likely (29%) than women (21%) to report working environment as a factor, perhaps reflective of the type of industrial or construction jobs that men are disproportionately employed in.

After smoking, radon gas is one of the main risk factors for lung cancer in Ireland but was only identified by 1% of respondents in the national sample, with the same figures for both target areas surveyed. While more respondents said they were aware of it when prompted in a later question, the low figures here suggest it was not one of the main risk factors most respondents associated with lung cancer.

***Figure 4: Risk Factors For Lung Cancer Identified***



When presented with a list of factors that may affect chances of developing cancer, awareness of each factor was generally quite high. Nationally, 98% agreed that being a smoker had an effect, 97% agreed that exposure to chemicals like asbestos had an effect and 90% agreed that exposure to another persons' cigarette smoke had an effect. More than three quarters of respondents nationally agreed with each risk factor, except for having had cancer treatment in the past (71%) and having a close relative with lung cancer (58%).

***Table 5:* The following may or may not increase a person's chance of developing lung cancer. How much do you agree or disagree that each of these can increase a person's chance of developing lung cancer?**

***Exposure to radon gas (a naturally occurring radioactive gas)***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 78% | 79% | 73% | 84% |
| NET Disagree | 4% | 4% | 6% | 2% |
| | | | | |
| Strongly Disagree | * | 1% | 2% | 1% |
| Disagree | 4% | 3% | 4% | 2% |
| Not Sure | 18% | 17% | 21% | 13% |
| Agree | 43% | 38% | 44% | 31% |
| Strongly Agree | 35% | 41% | 29% | 53% |

***Exposure to another person's cigarette smoke***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 90% | 86% | 84% | 88% |
| NET Disagree | 7% | 7% | 8% | 5% |
| | | | | |
| Strongly Disagree | * | 2% | 1% | 2% |
| Disagree | 6% | 5% | 7% | 4% |
| Not Sure | 3% | 7% | 7% | 7% |
| Agree | 51% | 46% | 58% | 34% |
| Strongly Agree | 40% | 40% | 26% | 54% |

***Having had treatment for any cancer in the past***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 71% | 64% | 63% | 65% |
| NET Disagree | 15% | 17% | 24% | 10% |
| | | | | |
| Strongly Disagree | 3% | 2% | 3% | 2% |
| Disagree | 12% | 14% | 21% | 8% |
| Not Sure | 15% | 19% | 13% | 25% |
| Agree | 45% | 46% | 51% | 41% |
| Strongly Agree | 25% | 18% | 12% | 24% |

***Having a close relative with lung cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 58% | 55% | 52% | 58% |
| NET Disagree | 31% | 25% | 29% | 22% |
| | | | | |
| Strongly Disagree | 5% | 5% | 5% | 6% |
| Disagree | 26% | 20% | 24% | 16% |
| Not Sure | 11% | 20% | 19% | 20% |
| Agree | 40% | 41% | 42% | 40% |
| Strongly Agree | 18% | 14% | 10% | 19% |

***Exposure to chemicals such as asbestos***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 97% | 93% | 92% | 94% |
| NET Disagree | 1% | 3% | 4% | 2% |
| | | | | |
| Strongly Disagree | * | 1% | * | 1% |
| Disagree | 1% | 2% | 4% | 1% |
| Not Sure | 2% | 4% | 4% | 5% |
| Agree | 30% | 32% | 44% | 19% |
| Strongly Agree | 67% | 61% | 47% | 74% |

***Having a previous history of cancer such as head and neck cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 77% | 68% | 67% | 69% |
| NET Disagree | 9% | 11% | 14% | 8% |
| | | | | |
| Strongly Disagree | 1% | 2% | 2% | 2% |
| Disagree | 8% | 9% | 12% | 7% |
| Not Sure | 14% | 21% | 19% | 23% |
| Agree | 49% | 47% | 54% | 41% |
| Strongly Agree | 28% | 21% | 13% | 28% |

***Air pollution***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 86% | 87% | 82% | 91% |
| NET Disagree | 7% | 6% | 9% | 4% |
| | | | | |
| Strongly Disagree | * | 1% | 2% | * |
| Disagree | 7% | 5% | 7% | 3% |
| Not Sure | 6% | 7% | 9% | 5% |
| Agree | 55% | 45% | 53% | 38% |
| Strongly Agree | 31% | 41% | 29% | 53% |

***Being a smoker***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 98% | 94% | 94% | 95% |
| NET Disagree | 1% | 2% | 3% | 2% |
| | | | | |
| Strongly Disagree | * | 1% | 1% | 1% |
| Disagree | 1% | 1% | 2% | 1% |
| Not Sure | 1% | 3% | 3% | 3% |
| Agree | 20% | 25% | 33% | 18% |
| Strongly Agree | 77% | 69% | 61% | 77% |

***Having a previous history of lung disease such as Chronic Obstructive Pulmonary Disease (COPD)***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 81% | 77% | 76% | 78% |
| NET Disagree | 8% | 7% | 9% | 5% |
| | | | | |
| Strongly Disagree | * | 1% | 1% | 1% |
| Disagree | 7% | 6% | 8% | 4% |
| Not Sure | 11% | 16% | 16% | 16% |
| Agree | 43% | 43% | 51% | 35% |
| Strongly Agree | 38% | 34% | 25% | 43% |

***Being an ex-smoker***

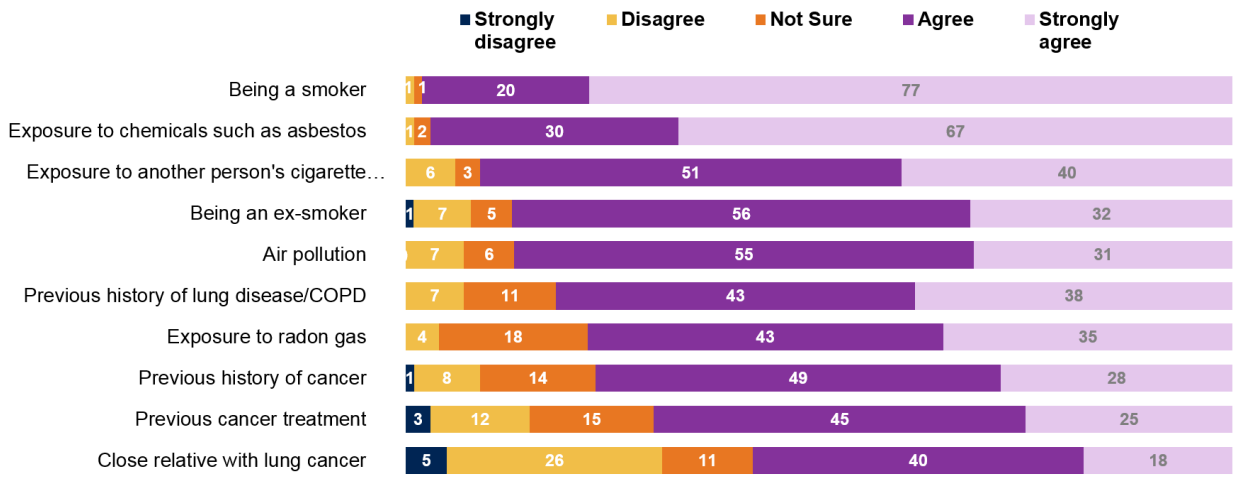
| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 88% | 83% | 81% | 85% |
| NET Disagree | 7% | 7% | 9% | 4% |
| | | | | |
| Strongly Disagree | 1% | * | * | * |
| Disagree | 7% | 7% | 9% | 4% |
| Not Sure | 5% | 10% | 9% | 11% |
| Agree | 56% | 49% | 58% | 39% |
| Strongly Agree | 32% | 35% | 23% | 46% |

While only 4% of respondents nationally disagreed that radon gas was a risk factor for cancer, 18% reported that they were unsure. In target areas of Dublin, 27% either disagreed or were unsure. In the target areas of Co. Carlow surveyed this figure was 16%. Carlow does generally have higher radon levels than Dublin so this figure may reflect higher awareness of this in Carlow, although awareness was higher across many factors for those in Carlow compared to those in Dublin.

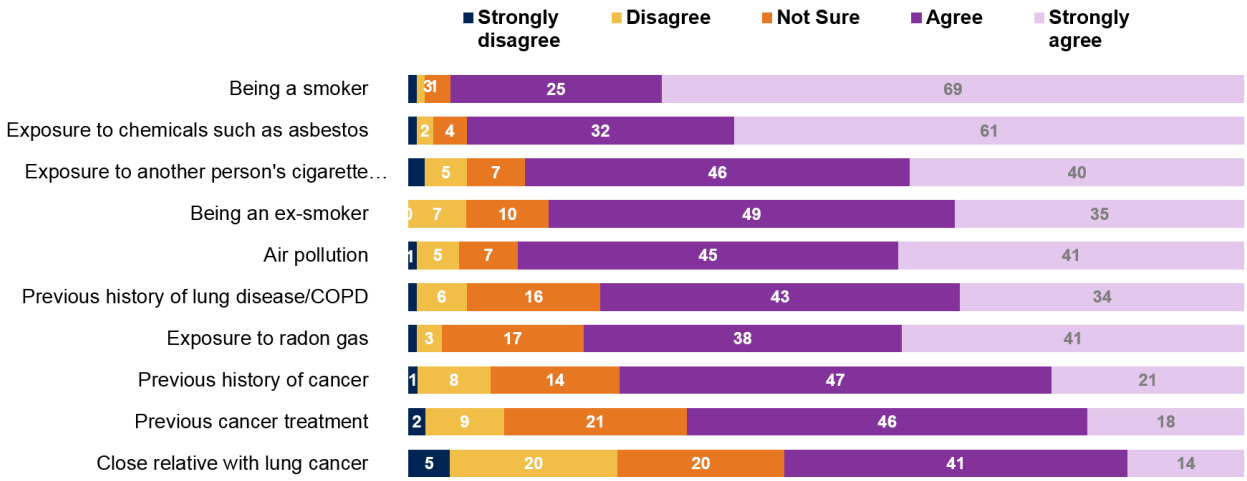
71% of respondents nationally agreed that having had treatment for any cancer in the past could increase someone's likelihood of developing lung cancer while 64% of respondents in the target areas surveyed agree with this. Nationally, those who have had cancer themselves were less likely than average to agree with this, at 61%. Respondents under the age of 65 were more likely to agree that previous history of cancer is a risk factor (81%) than those older than 65 (72%). Respondents who have themselves had cancer were less likely than those overall to agree with this (71%).

58% of respondents agreed that having a close relative with lung cancer can increase the chances of developing it. Respondents who themselves have had a close relative with cancer are more likely to agree with this statement, at 61%. Respondents under the age of 65 were more likely than those over this age to agree with this, at 65% compared to 49%.

### *Figure 5: Agreement on risk factors - National*




### *Figure 6: Agreement on risk factors – Target Areas*



# CONFIDENCE IN TAKING ACTION

A significant proportion of respondents reported that they would not be fully confident in noticing a symptom of lung cancer. 35% of respondents nationally reported that they would either be not very confident or not confident at all that they would notice, with 62% saying they would be fairly or very confident.

***Table 6: How confident or not are you that you would notice a symptom of lung cancer?***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **NET Confident** | 62% | 54% | 55% | 52% |
| **NET Not confident** | 35% | 40% | 38% | 42% |
| | | | | |
| **Not at all confident** | 12% | 14% | 9% | 19% |
| **Not very confident** | 24% | 26% | 29% | 23% |
| **Fairly confident** | 50% | 44% | 45% | 43% |
| **Very confident** | 12% | 10% | 10% | 10% |
| **DK/Refused** | 2% | 7% | 8% | 6% |

In target areas 54% reported being confident with 40% reporting they would not be confident. In Dublin 55% said they would be confident and in Carlow 52% said they would be confident. Nationally there was no difference in levels of confidence between men and women, although in target areas of Carlow 56% of women said they would be confident compared to 48% of men.

Perhaps unsurprisingly, those who had experienced cancer themselves were among the most likely to be confident, at 73% nationally. Those between the age of between 50 and 54, the youngest age group surveyed here, were less likely to be confident, at 56% nationally. This is also the age group least likely to have experienced cancer themselves, as incidence rates increase with age.

Among those who reported a lack of confidence in noticing a symptom, general awareness of symptoms and risks was lower throughout the different categories. For example, 76% of those who were confident agreed that loss of appetite could be a sign of lung cancer, compared to 61% of those who were not confident.

Nationally, respondents who had post-leaving certificate education were more likely to be confident than those who didn't, at 66% compared to 60% nationally. This gap is larger in target areas with 62% of those with post-leaving certificate education reporting confidence compared to 50% of those who did not.

***Table 7: If you had a symptom that you thought might be a sign of lung cancer how soon would you contact your doctor to make an appointment to discuss it?***

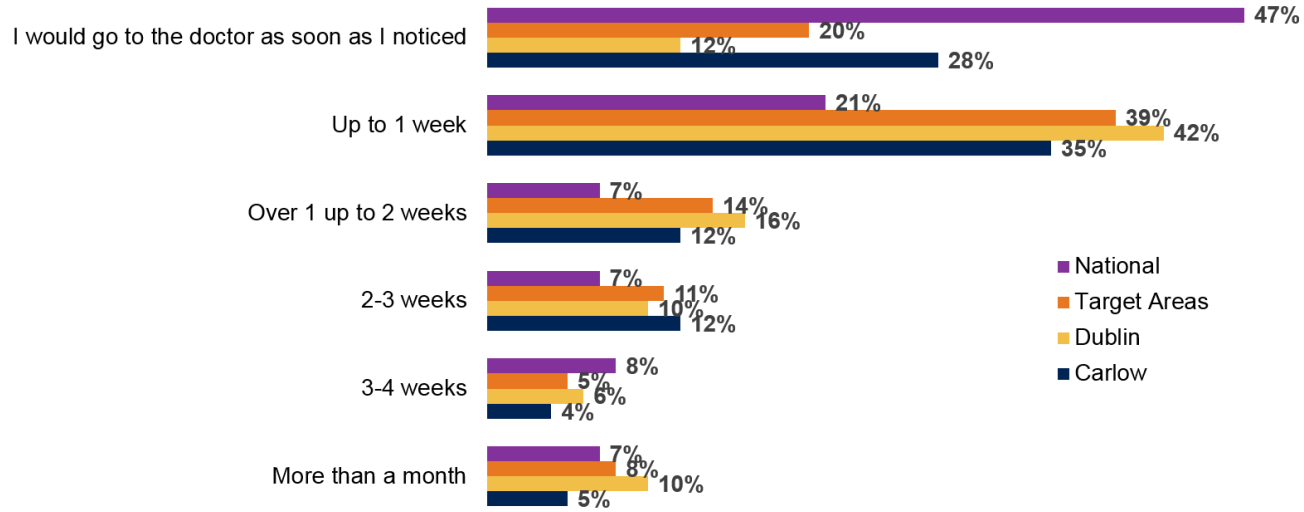
| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| I would go as soon as I noticed | 47% | 20% | 12% | 28% |
| Up to 1 week | 21% | 39% | 42% | 35% |
| Over 1 up to 2 weeks | 7% | 14% | 16% | 12% |
| Over 2 up to 3 weeks | 7% | 11% | 9% | 12% |
| Over 3 up to 4 weeks | 8% | 5% | 7% | 4% |
| More than a month | 7% | 8% | 8% | 5% |
| I would not contact my doctor | 1% | 1% | 1% | 1% |
| I would go to a pharmacist instead | * | 1% | * | 1% |
| I would go to a nurse (at my GP surgery) instead of my doctor | * | * | * | * |
| I would go to a healthcare professional at a hospital instead of a doctor | * | * | * | * |
| DK/Refused | 1% | 2% | 2% | 2% |

The lack of confidence among certain respondents is reflected in how long respondents would wait to see a doctor after noticing a symptom. Nationally, 47% reported that they would go as soon as they noticed while 21% reported that they would wait over 2 weeks.

In target areas only 20% reported that they would go as soon as they noticed and in target areas of Dublin this figure drops to 12%. 26% of respondents in target areas of Dublin would wait over 2 weeks.

Nationally, women are more likely to report that they would wait longer than 2 weeks than men, at a rate of 24% and 19% respectively.

### *Figure 7: Time Before Making An Appointment With Doctor*




Nationally, those who have had cancer themselves are more likely to make an appointment as soon as they noticed a potential symptom, at 58%. The rate of respondents who would make an appointment immediately was highest in Connacht/Ulster (52%).

There are various reasons why someone would be unable or unwilling to make a quick appointment for the doctor and respondents were asked what barriers exist that would make them less likely to. The most commonly reported reason was that they would be worried about what the doctor might find, at 30%, rising to 41% in target areas.

### *Figure 8: Reasons for not making appointment with doctor*

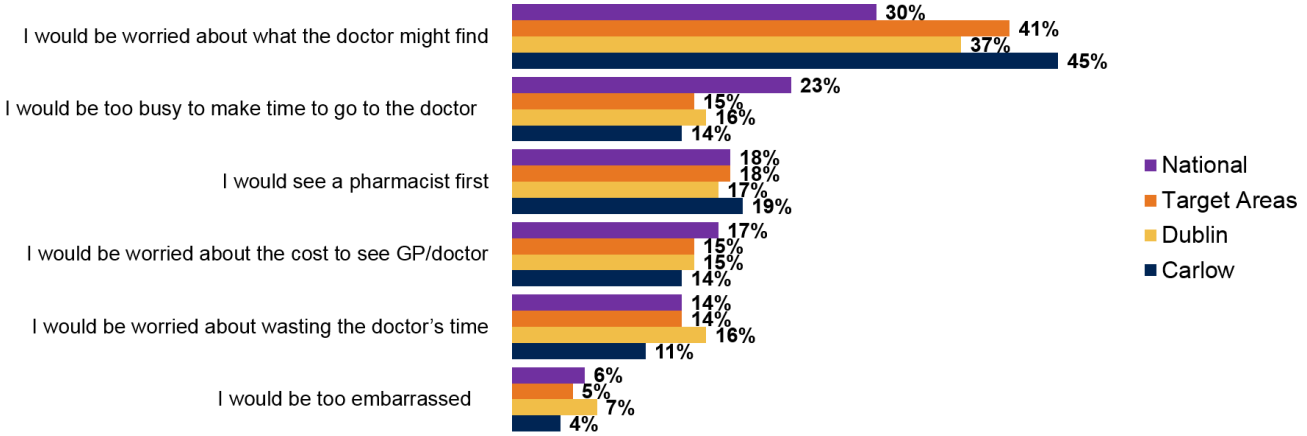


***Table 8: Sometimes people put off going to see the doctor even when they have a symptom they think might be serious. These are some of the reasons people give for delaying. Could you say if any of these might put you off going to the doctor?***

***I would be too embarrassed***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Yes | 6% | 5% | 7% | 4% |
| | | | | |
| Yes, often | 1% | 1% | 1% | 1% |
| Yes, sometimes | 5% | 5% | 6% | 4% |
| No | 94% | 95% | 93% | 96% |

***I would be worried about wasting the doctor's time***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Yes | 14% | 14% | 16% | 11% |
| | | | | |
| Yes, often | 5% | 2% | 2% | 2% |
| Yes, sometimes | 9% | 12% | 14% | 10% |
| No | 56% | 86% | 84% | 89% |

***I would be worried about what the doctor might find***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Yes | 30% | 41% | 37% | 45% |
| | | | | |
| Yes, often | 8% | 18% | 13% | 23% |
| Yes, sometimes | 22% | 23% | 23% | 23% |
| No | 70% | 59% | 63% | 55% |

***I would be too busy to make time to go to the doctor***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Yes | 23% | 15% | 16% | 14% |
| | | | | |
| Yes, often | 6% | 4% | 5% | 4% |
| Yes, sometimes | 16% | 11% | 11% | 10% |
| No | 77% | 85% | 84% | 86% |

***I would be worried about the cost to see GP/doctor***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **NET Yes** | 17% | 15% | 15% | 14% |
| | | | | |
| **Yes, often** | 7% | 6% | 5% | 6% |
| **Yes, sometimes** | 10% | 9% | 10% | 8% |
| **No** | 83% | 85% | 85% | 86% |

***I would see a pharmacist first***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **NET Yes** | 18% | 18% | 17% | 19% |
| | | | | |
| **Yes, often** | 6% | 5% | 3% | 7% |
| **Yes, sometimes** | 11% | 13% | 14% | 12% |
| **No** | 82% | 82% | 83% | 81% |

The second most commonly reported reason for putting off going to the doctor was being too busy, at 23% overall. Those aged between 50 and 54 were most likely to report this at 37%, perhaps due to respondents in this age group being more likely to be in employment than those who are older. Those in target areas are less likely to report this reason, at 15% compared to 23% nationally.

17% of respondents reported that they would be worried about the cost of visiting the GP. This was higher (19%) for those without a medical or GP visit card and was highest among those aged between 50 and 54, the age group least likely to have a medical card, at 26%. There was no significant difference in respondents worrying about the cost in target areas, with 15% of these respondents reporting this as a reason.

When asked if there were any other reason they may put off going to the doctor, 79% said there were none. The most commonly given answers to this question were it being hard to get an appointment (3%) and bad experience or mistrust of doctors (3%).

# BELIEFS ABOUT CANCER

In order to understand beliefs about cancer among those aged 50 and over in Ireland, respondents were presented with six statements that reflected commonly-held beliefs or opinions about cancer and asked to what extent they agreed or disagreed with each statement.

89% of respondents agreed that these days many people with cancer can expect to continue with normal activities and responsibilities. In target areas this figure was 86%. Those who currently smoked were less likely to report this, at 81%.

98% of respondents agreed that going to the doctor as quickly as possible after noticing a symptom of cancer could increase the chances of surviving. Those in target areas of Dublin were less likely to agree with this, at 93%.

***Table 9: For each of the statements can you tell me how much you agree or disagree with each item***

***These days many people with cancer can expect to continue with normal activities & responsibilities***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 89% | 85% | 87% | 85% |
| NET Disagree | 8% | 9% | 7% | 11% |
| | | | | |
| Strongly disagree | 3% | 1% | 1% | 1% |
| Tend to disagree | 6% | 8% | 7% | 10% |
| Tend to agree | 46% | 40% | 42% | 38% |
| Strongly agree | 44% | 46% | 45% | 47% |
| DK/Refused | 2% | 5% | 5% | 4% |

***Most cancer treatment is worse than the cancer itself***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 55% | 63% | 61% | 66% |
| NET Disagree | 35% | 24% | 26% | 23% |
| | | | | |
| Strongly disagree | 15% | 5% | 5% | 5% |
| Tend to disagree | 19% | 19% | 20% | 18% |
| Tend to agree | 31% | 33% | 33% | 33% |
| Strongly agree | 24% | 31% | 29% | 33% |
| DK/Refused | 10% | 12% | 13% | 11% |

***I would NOT want to know if I have cancer***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 14% | 28% | 32% | 25% |
| NET Disagree | 85% | 65% | 62% | 67% |
| | | | | |
| Strongly disagree | 68% | 43% | 32% | 55% |
| Tend to disagree | 17% | 21% | 31% | 12% |
| Tend to agree | 7% | 13% | 15% | 10% |
| Strongly agree | 8% | 16% | 17% | 15% |
| DK/Refused | 1% | 7% | 6% | 8% |

***Cancer can often be cured***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 92% | 88% | 88% | 87% |
| NET Disagree | 6% | 8% | 8% | 8% |
| | | | | |
| Strongly disagree | 2% | * | * | 1% |
| Tend to disagree | 4% | 8% | 8% | 7% |
| Tend to agree | 39% | 39% | 42% | 37% |
| Strongly agree | 52% | 48% | 47% | 50% |
| DK/Refused | 2% | 4% | 3% | 5% |

***Going to the doctor as quickly as possible after noticing a symptom of cancer could increase the chances of surviving***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| NET Agree | 98% | 94% | 93% | 95% |
| NET Disagree | 1% | 4% | 5% | 2% |
| | | | | |
| Strongly disagree | 1% | 1% | 2% | 1% |
| Tend to disagree | * | 3% | 4% | 2% |
| Tend to agree | 15% | 22% | 29% | 16% |
| Strongly agree | 83% | 71% | 64% | 78% |
| DK/Refused | 1% | 3% | 2% | 3% |

***Some people think that a diagnosis of cancer is a death sentence. To what extent do you agree or disagree that a diagnosis of cancer is a death sentence***

| | National | Target Areas | *Dublin* | *Carlow* |
|---|---|---|---|---|
| **NET Agree** | 30% | 43% | 47% | 39% |
| **NET Disagree** | 65% | 51% | 46% | 55% |
| | | | | |
| **Strongly disagree** | 38% | 24% | 22% | 25% |
| **Tend to disagree** | 28% | 27% | 24% | 30% |
| **Tend to agree** | 19% | 27% | 29% | 24% |
| **Strongly agree** | 11% | 16% | 18% | 15% |
| **DK/Refused** | 4% | 6% | 6% | 6% |

14% of respondents nationally reported that they would not want to know if they had cancer. This figure is almost double, at 28%, in target areas and is at 32% in target areas of Dublin. Those aged 65 and older were more likely to report this than those under 65, at 16% and 12% respectively.

When asked about whether most cancer treatment is worse than the cancer itself, 55% of respondents nationally agreed. Women were a lot more likely than men to agree with this, at 62% and 47% respectively. Women in target areas of Carlow were among the most likely to agree with this statement, at 70%.

31% of respondents nationally agreed that a diagnosis of cancer is a death sentence. Women were more likely to report that a diagnosis of cancer is a death sentence than men, at 33% and 28% respectively. In target areas 43% of respondents agreed that a diagnosis of cancer is a death sentence, with the same figure for both men and women. This figure is 47% in target areas of Dublin.

92% of respondents nationally agreed that cancer can often be cured. Men (94%) were more likely to agree with this than women (90%). In target areas surveyed the opposite was true with 86% of men agreeing with this compared to 89% of women.

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