

C Slyne<sup>1</sup>, L Ironmonger<sup>2</sup>, K Brain<sup>3</sup>, G McCutchan<sup>3</sup>, J Moffat<sup>2</sup>, K Connor<sup>2</sup>, S Smits<sup>3</sup>, R Thomas<sup>1</sup>, D Huws<sup>1</sup>

<sup>1</sup> Welsh Cancer Intelligence and Surveillance Unit, Public Health Wales    <sup>2</sup> Cancer Research UK    <sup>3</sup> Division of Population Medicine, Cardiff University

## INTRODUCTION

Lung cancer is the leading cause of cancer mortality in Wales. To promote earlier diagnosis, a four week Be Clear on Cancer mass-media campaign ran during July 2016 to encourage people to visit their GP with a cough lasting for three weeks or more. Evaluation assessed behavioural awareness, NHS activity and clinical outcome data.

## METHODS

Representative pre-campaign (n=1,001) and post-campaign (n=1,013) population samples were surveyed in 2016 to assess symptom awareness and perceived barriers to help seeking. Numbers of GP visits for cough symptoms in patients 50+ years, urgent suspected cancer (USC) referrals, GP radiology requests, and new lung cancer diagnoses and stage for 2016 pre-campaign, campaign and post-campaign periods were compared with corresponding periods in 2015.

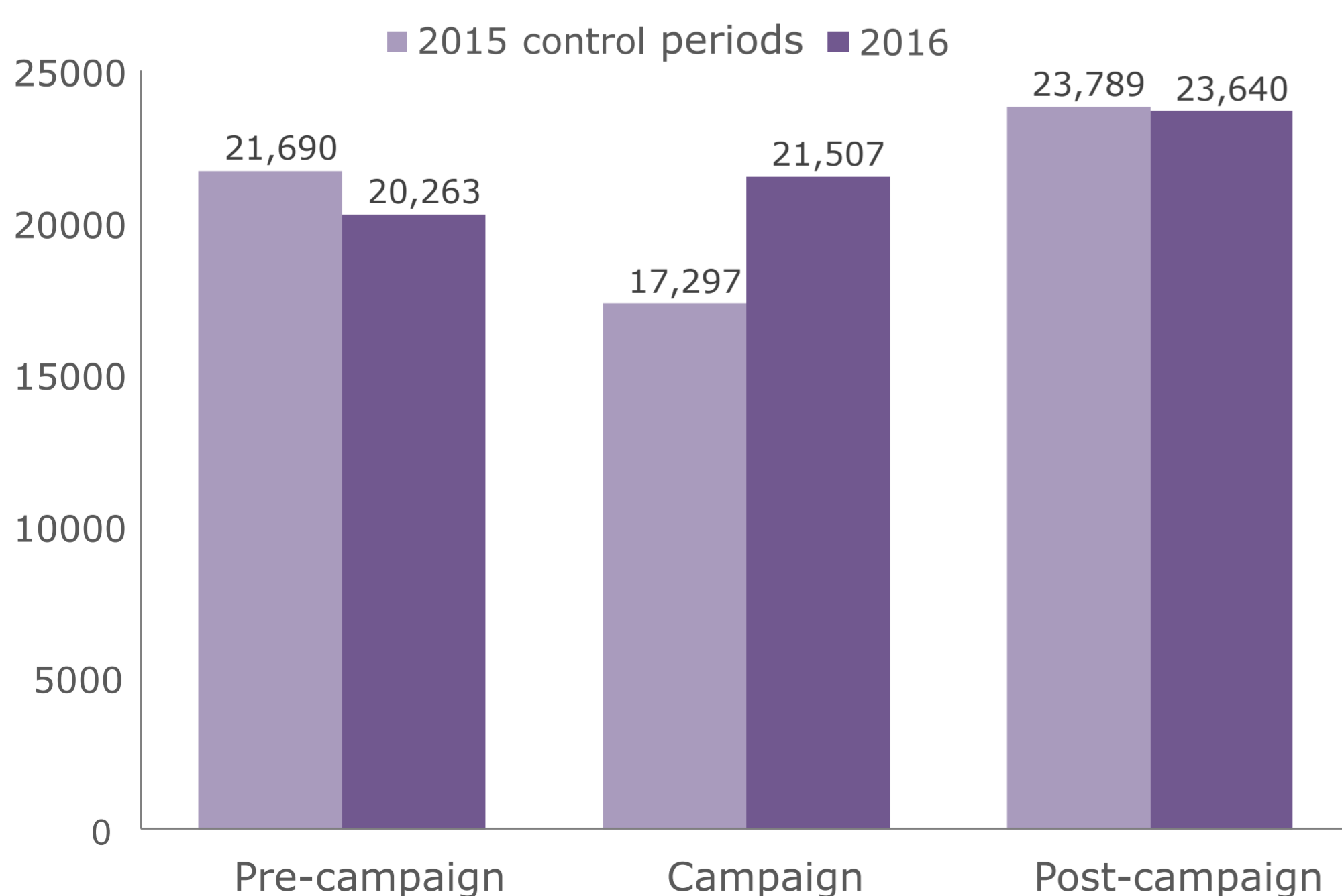
**Table 1 – Time frames used in the analysis**

2016	Pre-campaign	<b>Campaign</b>	Post-campaign
	May & June	<b>July &amp; August</b>	September & October
2015	Pre-campaign (control)	Campaign (control)	Post-campaign (control)
	May & June	July & August	September & October

## RESULTS

Increases in recall (pre-campaign 28%, post-campaign 41%, p<0.001) and recognition of cough (82%-87%, p<0.01) as a symptom of lung cancer was observed. Fewer respondents agreed with 'if I had a cough, I would be worried about wasting the GP's time' (49%-43%, p<0.001) post-campaign. There was a 24% increase in cough symptom GP visits during the campaign, compared to the corresponding 2015 period (17,297-21,507, p<0.001).

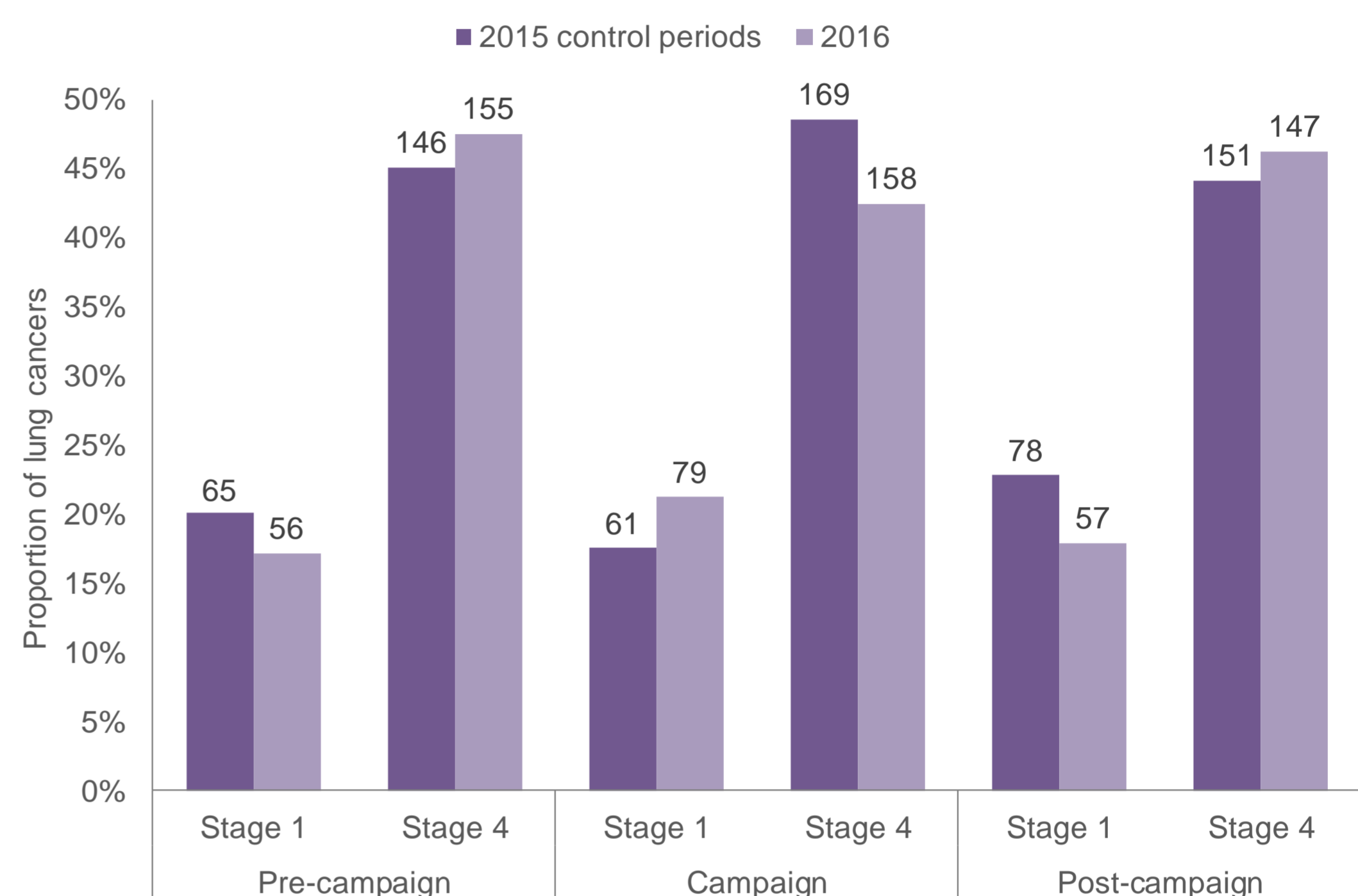
**Figure 1 - Number of GP practice visits per month for cough symptoms, patients aged 50+**



## RESULTS (continued)

GP-ordered chest X-rays increased by 23.4% (19,107 in 2015- 23,585 in 2016 p<0.001), whilst there was no statistically significant change in USC referrals. Increases in new diagnoses (401 cases in 2015- 412 cases in 2016, p=0.700) and proportion diagnosed at stage 1 (17.5% in 2015- 21.8% in 2016, p=0.209) were not statistically significant.

**Figure 2 - Proportion of stage 1 and stage 4 non-small cell lung cancers in Wales**



**Table 2 - Comparison of the 2016 Wales campaign and the 2012 England campaign (bold = statistically significant) (Different data sources used)**

	% change Wales	% change England
GP practice visits with cough symptoms	<b>+29</b>	<b>+63</b>
GP referred chest xrays	<b>+23</b>	<b>+19</b>
GP referred CT scans	+10	<b>+16</b>
Urgent suspected cancer referrals	-1	<b>+32</b>
Lung cancers diagnosed	+3	<b>+9</b>
Stage 1 NSCLC*	+22 (4% points)	<b>+22 (3.1% points)</b>
Stage 4 NSCLC*	-12 (-5.7% points)	<b>-7 (3.5% points)</b>
Received surgery first*	+23 (3.3% points)	<b>+17 (2.3% points)</b>
Referred via GP*	-7 (-3.3% points)	<b>+6 (3% points)</b>
Referred via emergency*	<b>+28 (6.3% points)</b>	<b>-9 (1.9% points)</b>

## CONCLUSION

Increased public awareness, GP visits for cough, and GP-ordered radiology did not translate into statistically significant increased USC referrals, new diagnoses, or stage shift. However, it was a relatively low intensity/short duration campaign, and small numbers of new cases during the short campaign and control periods could have hampered effect detection. Earlier diagnosis might be achieved by more intensive, sustained population-based campaigns supported by targeting, by improving GP diagnostic and referral systems, and through secondary care pathway redesign.

Public Health England funded the development of the assets used in the campaign. NHS Wales and Cancer Research UK funded the Welsh campaign and evaluation.