

1989-90 NATIONAL HEALTH SURVEY SCREENING FOR BREAST AND CERVICAL CANCER, AUSTRALIA

This publication contains statistics about women's knowledge of, and use of screening techniques and services for breast and cervical cancers. The term "screening" is used in this publication to refer to procedures performed for both diagnostic and screening purposes. These statistics, which refer to women aged 18 to 64 years, have been compiled from information collected in the 1989-90 National Health Survey conducted by the ABS, and represent a selection of those available. Statistics of deaths due to breast and cervical cancer are also provided.

Cancer is the second most common cause of death in Australian women. The breast is the most common primary site of malignant neoplasms causing death among females (2,449 deaths in 1990). The death rate from breast cancer increased by 13 per cent between 1981 and 1990. Cervical cancer is also a significant cause of deaths in Australian women (344 deaths in 1990).

The objectives of screening for cancer (or pre-cancerous cells) are to identify and/or diagnose abnormalities early enough to enable effective treatment to be given. Research suggests that cancer screening programs can be effective in bringing about reductions in mortality due to breast and cervical cancer. The *Health for All Australians* report has set goals of reducing deaths from breast and cervical cancer and set a target for mammography screening at a 70 per cent or more participation rate of eligible women by the year 1995.

Information was collected in the survey about the Papanicolaou (Pap) smear (or test) used for the detection of cervical cancer and pre-cancerous changes in the cervical tissue, breast self-examination (BSE), breast examination by a doctor or medical assistant and mammograms (an X-ray of the breast tissue).

MAIN FEATURES

- Some 91 per cent of women aged 18 to 64 years have had some type of breast examination.
- More women had had their breasts examined by a doctor or medical assistant (71%) than reported they examined their own breasts (63%) or had a mammogram (18%).
- Some 86 per cent of women aged 18 to 64 years reported having had a pap smear, and half of these women (50%) reported having the test in the twelve months prior to interview. Some 30 per cent of women who had not had a pap smear reported they had not heard of the test.
- Women in older age groups who are at a higher risk of developing cervical cancer were less likely to have pap smears as frequently as women in younger age groups.
- Women who had not had a pap smear are also less likely to have had any type of breast examination.

INQUIRIES

For further information about *National Health Survey output* contact Brian Richings on Canberra (06) 252 5786 or any ABS State Office.

For information about other ABS statistics and services please contact Information Services on Canberra (06) 252 6627, 252 5402, 252 6007 or any ABS State office.

SCREENING FOR BREAST CANCER

Of those women aged 18 to 64 years who completed the Women's Health Questionnaire, 70.9 per cent (an estimated 3,586,300 women) had had a breast examination by a doctor or medical assistant, and 62.8 per cent (an estimated 3,180,200 women) reported they regularly examined their own breasts for lumps. Only 17.8 per cent of women reported that they had had a mammogram. Of those women who had not had a mammogram, 23.3 per cent reported they had not heard of the test. In total, 91.2 per cent of women in this age group had had some type of breast examination.

Age and marital status

The majority of women in all age groups reported they had had some form of breast examination, although a lower proportion of women in younger age groups had been examined. The proportion of women who had had a breast examination by a doctor or medical assistant or who regularly examine their own breasts was similar for all ages except the 18 to 24 years age group. The proportion of women who had had a mammogram tended to increase with age, peaking at 32.9 per cent of women aged 45 to 54 years (see Table 1).

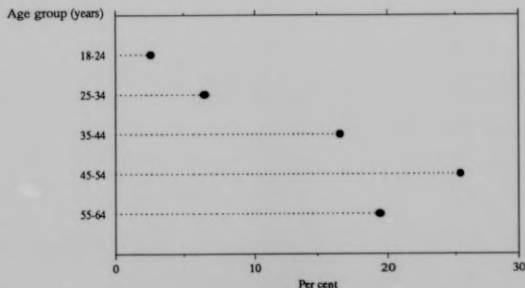
TABLE 1. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING TECHNIQUE BY AGE
AUSTRALIA, 1989-90
(Per cent)

Type of screening for breast cancer	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
Regularly examines own breasts	48.8	61.7	68.7	68.4	67.0	62.8
Has had breasts examined	47.1	73.4	78.9	78.4	74.1	70.9
Has had mammogram	3.3	9.4	21.8	32.9	28.1	17.8
Has had no breast examination	19.0	8.5	5.3	5.2	6.1	8.8
Total (a) —						
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
'000	934.5	1,362.9	1,231.8	838.4	692.4	5,060.0

(a) Women may have had more than one type of breast cancer screening technique performed, therefore figures do not add to totals.

Of those women who had had a mammogram, most had it in the 3 years prior to interview (74.0%). Chart 1 shows the proportion of women in each age group who have had a mammogram in the 3 years prior to interview.

CHART 1. WOMEN AGED 18 TO 64 YEARS: PROPORTION WHO HAVE HAD A MAMMOGRAM IN
THE LAST 3 YEARS BY AGE, AUSTRALIA, 1989-90



Women who have never married were less likely to have had a breast examination by a doctor or medical assistant (48.9%) and less likely to examine their own breasts (48.6%) than women in other marital status groups. As shown in Table 2 below, this pattern was similar across all age groups.

TABLE 2. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING TECHNIQUE BY MARITAL STATUS BY AGE, AUSTRALIA, 1989-90
(Per cent)

Type of screening for breast cancer	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
— Married (including de facto) —						
Regularly examines own breasts	58.3	63.9	70.2	69.4	70.3	67.3
Has had breasts examined	63.0	75.7	79.4	79.8	74.3	76.4
Has had a mammogram	5.0	10.0	21.8	34.0	28.5	20.4
— Separated/Divorced/Widowed —						
Regularly examines own breasts	49.6	59.7	64.3	64.7	57.8	61.4
Has had breasts examined	68.6	76.4	80.6	75.5	75.0	76.7
Has had a mammogram	5.8	11.6	23.4	29.0	26.9	23.2
— Never Married —						
Regularly examines own breasts	44.9	53.5	57.4	59.7	62.4	48.6
Has had breasts examined	40.3	62.6	67.4	74.8	63.3	48.9
Has had a mammogram	2.6	6.3	18.0	25.2	26.6	5.6
— Total —						
Regularly examines own breasts	48.8	61.7	68.7	68.4	67.0	62.8
Has had breasts examined	47.1	73.4	78.9	78.9	74.1	70.9
Has had a mammogram	3.3	9.4	21.8	32.9	28.1	17.8

Divorced (26.0%) and widowed (24.6%) women were the most likely to have had a mammogram. Of those who had never married, only 5.6 per cent had had a mammogram reflecting the relatively younger age distribution of this group. The older women in each marital status group were more likely to have had a mammogram than the younger women, probably reflecting concerns with the increased risk of breast cancer with age.

Birthplace

A larger proportion of Australian born women and of women born in other predominantly English speaking countries had had a breast examination by a doctor or medical assistant, or examine their own breasts than women of other birthplaces.

Overall, a higher proportion of women born in Northern America had had a breast examination (87.8%) than women of other birthplaces. A higher proportion of women born in the UK and Ireland than Australian born women had had a breast examination (76.6% and 72.2% respectively) and examine their own breasts (69.4% and 63.4% respectively). As shown in Table 3, Asian born women were the least likely to have had a breast examination (45.5%) or to examine their own breasts (47.1%).

TABLE 3. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING TECHNIQUE
BY COUNTRY OF BIRTH, AUSTRALIA, 1989-90
(Per cent)

Type of screening for breast cancer	Country of birth							Total overseas born	Total
	Australia	United Kingdom and Ireland	Europe	Middle East and North Africa	Asia(b)	Northern America	Other overseas countries		
Regularly examines own breasts	63.4	69.4	59.3	50.4	47.1	59.8	65.3	61.2	62.8
Has had breasts examined	72.2	76.6	65.8	57.0	45.5	87.8	72.0	67.1	70.9
Has had a mammogram	17.2	23.3	20.9	19.6	10.0	22.7	15.4	19.3	17.8
Has had no breast examination	9.4	7.5	5.6	5.9	7.7	5.2	9.1	7.0	8.8
Total(a)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Women may have had more than one type of screening technique performed, therefore figures do not add to totals. (b) Includes Southeast, Northeast and Southern Asia.

Overall, a higher proportion of overseas born women than Australian born women reported having had a mammogram (19.3% and 17.2% respectively). The highest proportion reporting having had a mammogram was recorded among women born in the UK and Ireland (23.3%), and most of these women had been tested in the last 3 years (71.6%). The lowest proportion of women who reported having had a mammogram in all age groups, except the group 18 to 24 years, was recorded for Asian born women (10.0% overall). Of those Asian born women who did have a mammogram, most had it within the last 3 years (74.9%).

The likelihood of women having had any type of breast examination also differed according to language. Those women who spoke English at home were more likely to have had a breast examination by a doctor or medical assistant (72.6%) or examine their own breasts (64.0%) than women who spoke another language at home (54.8% and 52.4% respectively). However, the difference was less marked for mammograms. Of those women who reported speaking English at home, 17.9 per cent reported having had a mammogram compared with 16.5 per cent of women who reported speaking another language at home.

Education

As shown in Table 4, the pattern of breast examination differs by education level. A higher proportion of women who left school at ages 15 years or under reported having a breast examination of some type than those women who left school at older ages. This may reflect the higher proportion of women in older age groups who left school aged 15 years or less. Women who had a post-school qualification were more likely to have had a breast examination by a doctor or medical assistant (76.0%) than women who had no post-school qualifications (67.7%). The proportions of women who regularly examine their own breasts, or who have had a mammogram were similar for those with and without post-school qualifications.

TABLE 4. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING TECHNIQUE
BY EDUCATION LEVEL, AUSTRALIA, 1989-90
(Per cent)

Type of screening for breast cancer	Age left school		Whether has qualifications		Total
	15 years or less(a)	Over 15 years	Has obtained post-school qualifications	Has no post-school qualifications	
Regularly examines own breasts	65.0	61.6	63.3	62.9	62.8
Has had breasts examined	73.2	69.6	76.0	67.7	70.9
Has had a mammogram	22.5	14.7	18.9	17.1	17.8
Has had no breast examination	6.5	10.2	7.8	9.4	8.8
Total(b)	100.0	100.0	100.0	100.0	100.0

(a) Includes women who never went to school. (b) Women may have had more than one type of screening technique performed, therefore figures do not add to totals.

Employment

The use of breast cancer screening techniques also varied according to employment status. Higher proportions of women who were either employed or not in the labour force reported having had a breast examination or regularly examining their own breasts than unemployed women. This pattern in part reflects the age distribution in each of these employment groups. Table 5 shows the use of breast cancer screening techniques according to employment status and age.

TABLE 5. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING TECHNIQUE
BY EMPLOYMENT STATUS BY AGE, AUSTRALIA, 1989-90
(Per cent)

Type of breast cancer screening	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
— Employed —						
Regularly examines own breasts	49.1	61.6	69.4	69.9	67.6	62.7
Has had breasts examined	48.5	72.8	80.4	81.1	79.9	71.3
Has had a mammogram	3.3	9.3	22.2	33.5	28.5	16.6
— Unemployed —						
Regularly examines own breasts	51.1	63.9	59.1	61.1	66.4	58.5
Has had breasts examined	43.7	71.2	72.6	71.1	77.6	62.7
Has had a mammogram	4.4	10.3	22.1	29.5	30.8	13.6
— Not in the labour force —						
Regularly examines own breasts	46.2	61.5	68.5	66.6	66.9	63.7
Has had breasts examined	43.8	75.1	75.8	76.2	72.2	71.3
Has had a mammogram	3.0	9.5	20.7	32.2	27.9	20.4
— Total —						
Regularly examines own breasts	48.8	61.7	68.7	68.4	67.0	62.8
Has had breasts examined	47.1	73.4	78.9	78.9	74.1	70.9
Has had a mammogram	3.3	9.4	21.8	32.9	28.1	17.8

Screening for breast cancer varied among occupation groups. Managers and administrators, and paraprofessionals were more likely to have had a breast examination by a doctor or medical assistant (79.4% and 78.8% respectively) and were also more likely to examine their own breasts (69.0% and 74.1% respectively) than other occupation groups.

States and Territories

Among the States and Territories, Tasmania had the highest proportion of women who reported having had a breast examination by a doctor or medical assistant (80.2%), followed by Queensland (77.4%). Northern Territory had the lowest proportion of women who had had a breast examination (61.2%), but this result is due in part to the younger population. The same pattern was found for those who reported examining their own breasts.

New South Wales had the highest proportion of women who reported having had a mammogram (20.9%, with 36.9% being in the last year), followed by Queensland (18.8%, with 45.2% being in the last year). Northern Territory had the lowest proportion of women who reported having had a mammogram (8.0%).

Overall, the proportion of women living in capital cities who had a breast examination by a doctor or medical assistant was similar to that of women living in other areas of the States (70.8% and 71.1% respectively), but women in capital cities were less likely to examine their own breasts (60.4% and 67.3% respectively). In contrast, a higher proportion of those living in capital cities (18.3%) reported having had a mammogram than women living in other areas (16.7%).

Other characteristics

Women who assessed their health status as excellent were most likely to have had a breast examination (73.5%) and to examine their own breasts (65.3%). Those who reported their health as fair were least likely to have had a breast examination (67.6%) or to examine their own breasts (60.0%). The proportion of women who reported having had a mammogram increased as self-assessed health status declined, from 16.5 per cent of women who said their health was excellent to 24.2 per cent of those who said their health was poor.

Body mass was derived from self-reported height and weight, and women were classified to one of four body mass groups (underweight, acceptable weight, overweight or obese) based on recommendations of the National Health and Medical Research Council (see Explanatory Notes). Body mass appeared to play some part in breast cancer screening. Women who were of acceptable weight or who were overweight were more likely to have had a breast examination (73.6% and 72.0% respectively). Similarly, overweight women were most likely to examine their own breasts (66.1%) and to have had a mammogram (21.3%). Underweight women were least likely to have had any breast examination, reflecting the younger age distribution of the underweight population.

Women who reported having neoplasms (of any type or location) were more likely to have had a breast examination (89.6%), examine their own breasts (73.4%) or to have had a mammogram (45.5%) than women with other types of conditions.

SCREENING FOR CERVICAL CANCER

Overall, 85.5 per cent of women aged 18 to 64 years who completed the Women's Health Questionnaire reported having had a pap smear. Of these women, almost half (49.7%) reported they had last had the test in the 12 months prior to interview. A further 32.9 per cent reported having had a pap smear 1 year to less than 3 years ago, while the remainder (17.4%) had last been tested 3 years or more previously. The National Health and Medical Research Council recommends a screening interval of two years for women who have no symptoms or history suggesting abnormal cervical cytology, and more frequently if such indications are present. Of those women who had not had a pap smear, 29.8 per cent reported they had not heard of the test.

Age and marital status

A higher proportion of women aged 35 to 44 years had had a pap smear (93.1%) than other age groups. Women aged 18 to 24 years were least likely to have had a pap smear (64.1%). As shown in Table 6 below, women in older age groups who are at greater risk of cervical cancer, were less likely to have pap smears as frequently as women in younger age groups. For example, of women aged 55 to 64 years, 53.7 per cent had either never had a test or had not been tested for three years or more prior to interview, compared with 13.7 per cent of women aged 25 to 34 years.

TABLE 6. WOMEN AGED 18 TO 64 YEARS: PERIOD SINCE LAST PAP SMEAR BY AGE, AUSTRALIA, 1989-90
(Per cent)

Period since last pap smear	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
Less than 1 year	45.4	54.6	44.0	34.6	21.8	42.5
1 year to less than 3 years	17.1	31.8	33.0	30.4	24.5	28.2
3 years to less than 5 years	1.3	4.1	7.8	8.8	10.1	6.1
5 years or more	0.3	1.8	8.2	16.3	25.8	8.8
Not tested(a)	36.0	7.8	6.9	9.9	17.8	14.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes women who had not heard of the pap smear test.

The higher frequency of pap tests in younger age groups may be influenced by contraceptive practices. Overall, women aged 18 to 50 years who were taking the contraceptive pill were more likely to have had a pap smear than those who were not taking it (90.8% and 84.0% respectively), and they were also more likely to have had a pap smear in the last year (68.2% and 48.9% respectively). Similarly, those women in this age group fitted with an IUD were more likely to have had a pap test (95.6%) than those without (83.6%).

Another factor influencing the pattern of pap smear tests by age group is whether women have had a hysterectomy. Some 11.7 per cent of women aged 18 to 64 years reported they had a hysterectomy, with the proportions highest in older age groups (eg 24.1% of women aged 55 to 64 years). Of women aged 55 to 64 years who had a hysterectomy, 76.6 per cent had not had a pap test in the previous three years.

In all age groups, a lower proportion of women who had never married reported having had a pap smear (60.9% overall) than women in other marital status categories. Divorced or separated women were the most likely to have had a pap smear (92.5%), followed by those who were married or in a de facto relationship (92.0%).

Birthplace

A larger proportion of Australian born women and of women born in predominantly English speaking countries reported having had a pap smear than women of other birthplaces. Of those women who had been tested, slightly more Australian born women than overseas born women (50.3% and 47.9% respectively) reported having had a pap smear in the previous 12 months. Only 2.0 per cent of Australian born women said they had not heard of the pap test, compared with 11.0 per cent of women born overseas.

The highest proportion of women who reported having had a pap smear was recorded for women born in the UK and Ireland (91.3%). Women born in Southeast, Southern and Northern Asia had the lowest proportion who reported having had a pap smear (57.1%), but were more likely to have been tested in the 12 months prior to interview (50.0%) than those born in the UK and Ireland (44.1%) and Europe (44.3%). This is consistent with the frequency of testing by age group noted previously.

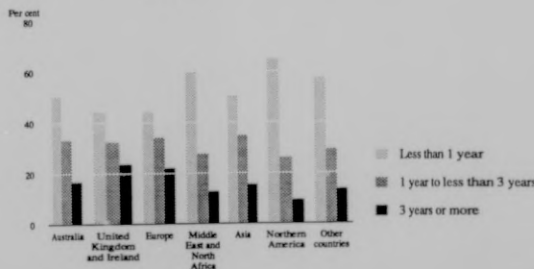
A higher proportion of women who spoke English at home reported having had a pap smear (88.0%) than those who spoke another language at home (62.0%).

TABLE 7. WOMEN AGED 18 TO 64 YEARS: WHETHER HAD PAP SMEAR BY AGE
BY BIRTHPLACE, AUSTRALIA, 1989-90
(Per cent(a))

Country of birth	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
Australia	65.9	94.7	96.4	94.7	85.7	87.8
United Kingdom and Ireland	71.5	95.0	95.5	92.6	88.4	91.3
Europe(b)	58.5	86.1	81.0	71.0	65.0	74.4
Middle East and North Africa	49.0	71.0	80.4	69.6	53.1	68.1
Asia(c)	17.4	59.0	71.3	72.3	57.3	57.1
Other countries(d)	69.1	93.8	90.9	90.9	77.1	87.2
Total overseas born	54.1	84.4	85.2	80.9	73.9	79.0
Total	64.1	92.2	93.1	90.2	82.2	85.5

(a) Per cent of women of each birthplace and age group who had had a pap smear. (b) Includes Eastern Europe and the USSR. (c) Includes Northeast, Southern and Southeast Asia. (d) Includes the USA and Canada and New Zealand.

CHART 2. WOMEN AGED 18 TO 64 YEARS WHO REPORTED HAVING HAD A PAP SMEAR: PERIOD SINCE
LAST PAP SMEAR BY SELECTED BIRTHPLACE, AUSTRALIA, 1989-90
(Per cent)



Education

Women who had left school at age 15 years or less were more likely to have had a pap smear (88.7%) than those who left school aged over 15 years (84.0%). However, a higher proportion of those who left school after 15 years of age had last had a pap smear in the 12 months prior to interview (54.6%) than those who left school at 15 years or less (42.8%). Almost a quarter (24.6%) of women who left school at ages 15 years or less had last had a pap smear 3 years or more prior to interview. In general, women who had obtained a qualification since leaving school were more likely to have had a pap smear than those with no post-school qualification, and were more likely to have pap smears more frequently.

Employment

Employed women and those not in the labour force were more likely to have had a pap smear (86.3% and 85.3% respectively) than the unemployed (78.4%). However, of those who reported having had a pap smear, the unemployed were most likely to have had it in the last year (54.1%). Those not in the labour force were least likely to have had a pap smear in the last year (44.1%), although a further 32.8 per cent had last been tested 1 to 3 years ago.

Paraprofessionals, followed by managers and administrators were most likely to have had a pap smear (92.4 per cent and 91.5 per cent respectively). Plant and machine operators and drivers were least likely (76.6%). Of women who reported having had a pap smear, tradespersons were most likely to have had it in the last year out of all the occupation groups (57.6%), while labourers and related workers were least likely to have had their pap smear in the last year (45.2%).

States and Territories

Of the States and Territories, the Northern Territory had the highest proportion of women who reported having had a pap smear (90.6%) followed by Tasmania and Queensland (both 89.9%). Victoria had the lowest proportion of women who reported having had a pap smear (81.8%). However, of those women who did report having had a pap smear, those in the ACT were most likely to have had it in the last year (60.3%) while those in Western Australia were least likely (43.9%).

A lower proportion of women in capital cities reported having had a pap smear (83.6%) than women in other areas of the country (89.1%), but the pattern of frequency of tests were similar.

Other characteristics

Women who felt they were in excellent health were most likely to have had a pap smear (88.4%). The proportion of women who reported having had a pap smear decreased as reported health declined, to 76.5 per cent of those women who reported they were in poor health. Of those who had had a pap smear, women who said their health was excellent were most likely to have had a test in the last year (51.8%), whereas those who said their health was poor were least likely to have had a test in the last year (43.0%).

Body mass (see Explanatory Notes) appeared to play some part in whether women had pap smears. Women of acceptable weight were most likely to have had a pap smear (87.7%), while the lowest proportion who reported having had a pap smear was recorded for women who were underweight (81.3%). This is in part a factor of age, since the majority of underweight women are in younger age groups.

Underweight women were more likely to have had the test in the last year (46.2%) than those of a different body mass group. The proportion of women who had been tested in the last year decreased as body mass increased, with obese women least likely to have had a pap smear in the last year (34.0%) or in the last three years (62.1%).

TABLE 8. WOMEN AGED 18 TO 64 YEARS: PERIOD SINCE LAST PAP SMEAR BY AGE BY BODY MASS
AUSTRALIA, 1989-90
(Per cent)

	Age group (years)					
Period since last pap smear	18-24	25-34	35-44	45-54	55-64	Total
— Underweight —						
Less than 1 year	43.6	55.5	47.1	35.6	23.6	46.2
1 year to less than 3 years	16.1	29.8	33.2	32.6	26.9	26.1
3 years or more	1.5	5.5	14.1	22.1	29.8	9.0
Not tested	39.0	9.3	5.6	9.7	19.9	18.7
— Acceptable weight —						
Less than 1 year	46.1	56.3	46.7	37.1	24.6	45.1
1 year to less than 3 years	17.1	31.5	33.6	31.5	28.8	29.1
3 years or more	1.4	5.3	14.4	24.6	34.2	13.4
Not tested	35.5	6.9	5.4	6.7	12.4	12.3
— Overweight —						
Less than 1 year	45.7	53.6	40.1	31.5	20.4	37.2
1 year to less than 3 years	18.7	32.6	32.0	30.7	21.6	28.3
3 years or more	2.7	7.1	18.5	26.3	39.7	21.0
Not tested	33.0	6.7	9.3	11.5	18.4	13.6
— Obese —						
Less than 1 year	45.9	44.4	36.8	32.7	16.1	34.0
1 year to less than 3 years	26.8	37.5	32.5	25.8	16.2	28.1
3 years or more	0.8	9.1	20.7	26.6	36.3	21.3
Not tested	26.5	9.2	9.9	14.7	31.4	16.6
— Total(s) —						
Less than 1 year	45.4	54.6	44.0	34.6	21.8	42.5
1 year to less than 3 years	17.1	31.8	33.0	30.4	24.5	28.2
3 years or more	1.6	5.9	16.0	25.1	35.9	14.8
Not tested	36.0	7.8	6.9	9.9	17.8	14.5

(a) Includes women for whom body mass was not available.

Women who reported having complications of pregnancy, childbirth or the puerperium (95.4%) or neoplasms (92.6%) were more likely to have had a pap smear than women reporting other conditions.

Women who had consulted a doctor in the 12 months prior to interview were more likely to have had a pap smear (86.6%) than women who had last consulted a doctor 12 months or more ago (78.5%). However, of those women who had consulted a doctor in the 12 months prior to interview, 40.0 per cent had not had a pap smear in that time.

More ex-smokers (92.3%) reported having had a pap smear than smokers (88.6%) or non-smokers (81.8%). Of women who reported having had a pap smear, the same pattern was found for whether or not they had been tested in the last year.

Table 9, which shows the proportion of women who had some type of breast cancer screening by the period since their last pap smear, indicates that those women who had not had a pap smear were also least likely to have any type of breast examination, while those who had had a pap smear in the last three years were more likely to regularly examine their own breasts and to have had a breast examination by a doctor or medical assistant.

TABLE 9. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING AND PERIOD SINCE LAST MAMMOGRAM BY PERIOD SINCE LAST PAP SMEAR AUSTRALIA, 1989-90 (Per cent)

Type of breast cancer screening and period since last mammogram	Pap smear less than 3 years ago	Pap smear 3 years or more ago	Have not had a pap smear(a)	Total
Breast self-examination	66.6	64.3	42.9	62.8
Breast examination by doctor or medical assistant	79.4	71.2	28.9	70.9
Mammogram	19.2	22.1	6.3	17.8
Mammogram less than 3 years ago	14.9	13.4	4.2	13.1
Mammogram 3 years or more ago	4.3	8.7	2.1	4.6
No breast examination	6.3	8.6	21.1	8.8
Total(b)	100.0	100.0	100.0	100.0

(a) Includes women who have not heard of the pap smear test. (b) Women may have had more than one type of screening technique performed, therefore figures do not add to totals.

Table 10 shows, for age groups, the estimated numbers of women by their use of the various breast and cervical cancer screening techniques. An estimated 133,500 women (2.6%) aged 18 to 64 years reported they had never had a pap smear or any type of breast examination. Proportions differed by age group, from 10.1 per cent of women aged 18 to 24 years, to less than one per cent of the age groups 35 to 44 and 45 to 54 years.

TABLE 10. WOMEN AGED 18 TO 64 YEARS: TYPE OF BREAST CANCER SCREENING BY WHETHER EVER HAD A PAP SMEAR BY AGE, AUSTRALIA, 1989-90 ('000)

Type of breast cancer screening, and whether had pap smear	Age group (years)					Total
	18-24	25-34	35-44	45-54	55-64	
Breast self-examination —						
Have had pap smear	328.8	798.2	809.5	533.8	395.6	2,866.0
Have not had pap smear	109.8	33.4	23.4	26.1	51.1	243.8
Breast examination by doctor or medical assistant —						
Have had pap smear	383.4	966.4	942.2	626.8	455.9	3,374.7
Have not had pap smear	47.6	24.3	16.2	21.6	44.3	154.0
Mammogram —						
Have had pap smear	25.6	125.1	259.6	264.2	177.7	852.1
Have not had pap smear	5.4	1.8	3.5	7.2	13.7	31.6
No breast examination —						
Have had pap smear	74.0	96.6	54.2	35.2	30.5	290.5
Have not had pap smear	94.0	14.9	9.3	6.5	8.8	133.5
Total(a)	934.5	1,362.9	1,231.8	838.4	692.4	5,060.0

(a) Women may have had more than one type of screening technique performed, therefore figures do not add to totals.

DEATHS DUE TO BREAST AND CERVICAL CANCER

The following table shows the number and rates over the last 10 years of female deaths in Australia due to both breast cancer and cervical cancer. Death rates for breast cancer increased from 1981 to 1990, while there was a slight decline in death rates due to cervical cancer from 1981 to 1990.

TABLE 11. DEATHS DUE TO BREAST AND CERVICAL CANCER, BY AGE, AUSTRALIA, 1981-1990

Cause of death and Age group (years)	Years									
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
— Number of Deaths —										
Breast cancer —										
Less than 45	166	196	173	188	225	228	246	221	251	249
45-54	325	334	327	340	354	334	342	361	389	404
55-64	486	502	542	480	529	511	524	540	514	507
65-74	429	452	506	531	524	570	521	552	559	598
Total	1,888	1,995	2,033	2,065	2,207	2,230	2,258	2,348	2,431	2,449
Cervical cancer —										
Less than 45	47	55	59	62	61	63	62	54	68	94
45-54	49	54	56	53	47	49	43	47	60	54
55-64	84	90	78	63	74	84	62	84	54	60
65-74	96	76	81	78	97	84	105	77	104	70
Total	361	349	337	334	366	350	336	350	362	344
— Death rate(a) —										
Breast cancer —										
Less than 45	3.2	3.7	3.2	3.5	4.1	4.1	4.4	3.9	4.3	4.3
45-54	44.1	45.2	44.1	45.5	46.8	43.4	43.3	44.4	45.9	45.9
55-64	70.3	71.3	75.5	65.7	71.7	69.2	71.3	73.8	70.5	69.9
65-74	83.9	86.1	94.8	98.1	95.0	100.4	89.2	92.3	91.6	96.3
Total	25.3	26.2	26.4	26.7	27.9	27.8	27.7	28.4	28.8	28.6
Cervical cancer —										
Less than 45	0.9	1.0	1.1	1.1	1.1	1.1	1.1	0.9	1.2	1.6
45-54	6.6	7.3	7.6	7.1	6.2	6.4	5.4	5.8	7.1	6.1
55-64	12.1	12.8	10.9	8.6	10.0	11.4	8.4	11.5	7.4	8.3
65-74	18.8	14.5	15.2	14.4	17.6	14.8	17.6	12.9	17.0	11.3
Total	4.8	4.6	4.4	4.3	4.6	4.4	4.1	4.2	4.3	4.0

(a) Rate per 100,000 population.

EXPLANATORY NOTES

The 1989-90 National Health Survey was conducted during the twelve months October 1989 to September 1990 and covered approximately 22,000 private and special dwellings (eg. hotels, motels, boarding houses) selected throughout Australia. Hospitals and nursing homes were excluded from the sample. Where possible, each adult member of selected households was interviewed by a trained ABS interviewer; an adult member of each household, usually a parent or guardian, was asked to provide information about children in the household.

2. The National Health Survey was conducted over a full year, with an approximately equal number of households selected for interview in each fortnight. As the estimates are based on information obtained from occupants of a sample of dwellings, they may differ from figures that would have been obtained if all dwellings had been included.
3. Information collected in the survey included medical conditions experienced, actions people had taken in relation to their health such as doctor consultations, use of medications, episodes in hospital, and aspects of lifestyle and other factors which may influence their health such as smoking, alcohol consumption, exercise and height and weight. A range of demographic and socio-economic information was also collected.
4. Information about women's use of screening techniques for breast and cervical cancer, and other health issues specific to women, was collected in a separate self-completion questionnaire. Women respondents aged 18 to 64 years were invited to fill out this questionnaire at the completion of their survey interview. Approximately 97 per cent of those women eligible participated in this part of the survey. As a result, figures shown in this publication relate to the estimated 5,060,000 women represented by those who participated, rather than to the estimated 5,206,600 women aged 18 to 64 years in the population.
5. Body mass index scores were derived from self-reported height and weight using the formula of weight (kg) divided by the square of height (m^2). Persons were classified according to one of four groups according to their scores. These groups are based on recommendations of the National Health and Medical Research Council, as applied in the analysis of data from the National Heart Foundation's Risk Factor Prevalence Study 1989.
6. Details of the survey, its scope and coverage, content, methods and notes concerning the interpretation of results (including comparability with previous ABS health surveys) are contained in the publication *1989-90 National Health Survey: Users' Guide* (Cat. No. 4363.0). Information about the range of publications to be released from this survey, and the availability of unpublished results is contained in the information brochure *1989-90 National Health Survey: Products and Services* which is available free of charge from any office of the ABS.

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