Royal Glamorgan Hospital, Llantrisant CF72 8XR M Snow senior house officer in general surgery M H Lewis consultant surgeon K Gower-Thomas consultant radiologist Correspondence to: M H Lewis mike.lewis@pr-tr. wales.nhs.uk The interviewed doctors came from two hospitals in two different regions. Therefore our results may not apply throughout the United Kingdom, but it does seem that most doctors have no idea as to the amount of radiation received by patients undergoing commonly requested investigations, despite them all having undertaken the radiation protection course. This lack of awareness of the degree of exposure to ionising radiation becomes particularly pertinent when we consider the number of patients who receive inappropriate or repeat examinations.

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Competing interests: None declared.

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## Is asking patients in palliative care, "Are you depressed?" appropriate? Prospective study

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Depression is a serious problem that affects about a quarter of patients in palliative care.\(^1\) Diagnosing depression is difficult because most patients are understandably sad. Lack of recognition of depression can lead to further morbidity and a detrimental effect on the quality of life.\(^2\)

Screening for depression attracts wide interest, but as patients are frail and unwell, a screening tool needs to be brief. Asking North American patients in palliative care the single question, "Are you depressed?" had perfect sensitivity and specificity and 100% positive predictive value compared with the schedule for affective disorders. Other studies of patients with stroke and elderly patients found that a single statement with a "yes" or "no" response correctly classified more than 80% of people as depressed or not depressed.

## Participants, methods, and results

Patients were eligible to participate if they received only palliative and supportive day care; 106 were eligible to participate in the study during six months. A total of 74 patients consented to participate; we got baseline demographic information on age, ethnicity, diagnosis, past history of depression, and performance status (all patients had an Eastern Cooperative Oncology Group (ECOG) performance of 2 or 3—that is, physical function was limited). Age, sex, disease state, and performance status did not differ between consenters and non-consenters. Patients were aged 28-89 (mean 68) years.

We compared the result of the single question, "Are you depressed?" with a semistructured clinical psychiatric interview based on the criteria of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*. We calculated the sensitivity, specificity, and the positive and negative predictive values.

Number of patients answering the question, "Are you depressed?" and results of their clinical interview

Clinical interview (Diagnostic and Statistical	Are you depressed?	
Manual of Mental Disorders, 4th ed)	Yes	No
Depressed	11	9
Not depressed	14	40
Total	25	49

We found that 27% of patients had depression (95% confidence interval 17% to 37%). To the single question, "Are you depressed?" 25 patients responded "yes"; in the clinical interview we found that 11 were depressed. Nine patients who replied "no" to the question were considered depressed by clinical interview (table). A yes answer had a sensitivity of 55% (34% to 77%) and specificity of 74% (61% to 84%) and positive and negative values of 44% and 82% respectively.

## Comment

The single question, "Are you depressed?" is widely believed to successfully screen for depression in palliative care—many clinicians use it routinely—but it does not have the perfect sensitivity and specificity in the UK population that it achieved in North America.<sup>3</sup>

Although this is a small study, it is larger than many other studies concerning patients in palliative care. A quarter of patients had depression. The single question in this study correctly identified just over half of the patients diagnosed as depressed and approximately three quarters of the patients diagnosed as non-depressed.

In the North American study, the researchers included the single question, "Are you depressed?" in the schedule of the interview, which may have biased the results. Our results are also less favourable than those found in a study of stroke patients and elderly patients which compared the discriminating power of

the question with an existing scale and not a semistructured interview.<sup>4 5</sup> Such a subjective question requires further rigorous evaluation before we advocate its widespread application to screen for depression in patients with advanced cancer.

Contributors: ML-W and MD designed and developed the study. ML-W, FT, and IB carried out the study. ML-W, MD, and FT analysed the data. ML-W and MD drafted the paper; all authors revised and approved the final version. ML-W and MD are guarantors.

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Competing interests: None declared.

Ethical approval: Leicestershire Health Authority.

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## Risk of suicide in twins: 51 year follow up study

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Strong family ties and commitments are known to be important in the prevention of suicide. Having parents alive and together, being married, and having young children are negatively correlated with risk of suicide. 1-3 The presence of siblings, however, has rarely been looked at in studies of suicide or attempted suicide. A Danish register study found no protective effect associated with having siblings,1 but neither the age nor the sex of siblings was considered. Twins represent a unique sibling relationship. They not only share the same family and social environment at least for the first part of their lives, but they also show a higher level of closeness both in terms of the number of years spent together before leaving the parental home and in the frequency of contacts afterwards. We investigated whether the suicide rate in twins was different to that in the general population.

Participants, methods, and results

Through the population based Danish twin registry we identified same sex twins born from 1870 to 1930 and established date and cause of death from 1943 to 1993 through the Danish registry of causes of death (this register linkage has previously been described in more detail\*). We included 21 653 individual twins alive on 1 January 1943, 13 318 (62%) of whom died during the follow up.

From 1951 we coded the cause of death according to the ICD-6, ICD-7, and ICD-8 (international classification of diseases, sixth, seventh, and eighth editions). For deaths from before 1951 we used the coding system of the Danish registry of causes of death. Here we report on the deaths coded as suicide (1943-50: Danish registry codes 900-930; 1951-68: ICD-6 and 7 codes 970-979; 1969-93: ICD-8 codes 950-969). We calculated the expected number suicides in the twin population by multiplying the observed person years with suicide rates for Denmark stratified for sex, one year age group, and five year calendar period (source: the Danish registry of causes of death). Standardised suicide rates were calculated as the observed number of suicides divided by the expected number of suicides.

As previously reported4 the twin cohorts had a mortality pattern similar to that in the general population (standardised mortality 0.95 for men and 0.98 for women). However, twins had a substantially lower suicide rate compared with the general population, with 211 observed suicides versus 292.8 expected, corresponding to a standardised suicide rate of 0.74 for men (95% confidence interval 0.62 to 0.88) and 0.69 for women (0.55 to 0.86) (table). The suicide risk for twins was consistently lower for both men and women in all six 10 year birth cohorts. We also considered the risk of suicide stratified by cohorts and follow up time (1-25 years and ≥25 years). All strata consistently showed a reduced suicide risk for twins, indicating no age or cohort differences. Furthermore, the suicide rate was of similar size in monozygotic and dizygotic

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Suicide rate among Danish twins born 1870-1930 and followed up to 1 January 1943-31 December 1993\*

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Birth cohort	Alive on 1 January _ 1943	Suicides		Standardised suicide
		Observed	Expected	rates (95% CI)†
1870-9				
Men	663	0	4.4	0
Women	790	2	2.4	0.84 (0.10 to 3.03)
1880-9				
Men	1021	9	10.1	0.89 (0.41 to 1.69)
Women	1159	2	6.4	0.31 (0.04 to 1.13)
1890-9				
Men	1390	15	20.4	0.73 (0.41 to 1.21)
Women	1483	4	12.1	0.33 (0.09 to 0.84)
1900-9				
Men	1888	25	34.7	0.72 (0.47 to 1.06)
Women	2048	16	23.5	0.68 (0.39 to 1.10)
1910-9				
Men	2301	42	47.0	0.89 (0.64 to 1.21)
Women	2736	26	35.9	0.72 (0.47 to 1.06)
1920-30				
Men	2933	37	56.3	0.66 (0.46 to 0.91)
Women	3241	33	39.4	0.84 (0.58 to 1.18)
All				
Men	10 196	128	173.0	0.74 (0.62 to 0.88)
Women	11 457	83	119.8	0.69 (0.55 to 0.86)

\*For 1951 and 1952 suicides were not coded separately and therefore both observed and expected suicides in these two years are omitted from calculations.
†Based on Poisson distribution.