diagnosis could improve survival outcome. However, the natural history of ovarian cancer is unknown and there is insufficient evidence to say whether the duration of symptoms before diagnosis affects overall survival, quality of life or disease specific survival. Nonetheless, it is generally agreed that early symptom identification, with a high index of suspicion for ovarian cancer, has the potential to improve prognosis.

**SYMPTOMS**

Although ovarian cancer is often dubbed a silent killer, a systematic review estimated that 93% of women experienced symptoms before diagnosis. The problem is that a GP with an average sized practice may only see one case of ovarian cancer every five years or so, which makes recognition of the symptoms and early diagnosis more difficult. Consequently, women may visit their GP with symptoms of ovarian cancer on several occasions before these symptoms are recognised as significant.

Evidence from case control studies has shown that combining a number of symptoms that occur on a persistent or frequent basis (particularly more than 12 times per month) can have a sensitivity of up to 85% and a positive predictive value of the order of 0.2% i.e. 1 in 500 women would have ovarian cancer. These data form the basis of the recent NICE guideline recommendations, see table 1, above.

This guidance also stresses that appropriate assessments for ovarian cancer should be initiated in any woman of 50 or over who develops symptoms that suggest irritable bowel syndrome (IBS) because IBS rarely presents for the first time in women of this age.

**Table 1**

Ovarian cancer symptoms and signs: NICE recommendations

- Refer urgently if physical examination identifies ascites and/or a pelvic or abdominal mass (which is not obviously uterine fibroids)
- Carry out tests in primary care if a woman (especially aged 50 or over) reports having any of the following symptoms on a persistent or frequent basis, (particularly more than 12 times per month):
  - persistent abdominal distension (bloating)
  - feeling full (early satiety) and/or loss of appetite
  - pelvic or abdominal pain
  - increased urinary urgency and/or frequency
- Consider carrying out tests in primary care if a woman reports unexplained weight loss, fatigue or symptoms on a persistent or frequent basis, aged 50 or over
- Reports having any of the following characteristics:
  - changes in bowel habit
  - increased urinary urgency and/or frequency
- Advise any woman who is not suspected of having ovarian cancer to return to her GP if her symptoms become more frequent and/or persistent
- Carry out appropriate tests for ovarian cancer in any woman of 50 or over who has experienced symptoms within the past 12 months that suggest irritable bowel syndrome (IBS) because IBS rarely presents for the first time in women of this age.

**Table 2**

Risk of Malignancy Index (RMI)

RMI combines three pre-surgical features: serum CA125, menopausal status (M) and ultrasound score (U).

\[ \text{RMI} = U \times M \times \text{CA125} \]

- The ultrasound result is scored 1 point for each of the following characteristics: multilocular cysts; solid areas; metastases; ascites and bilateral lesions.
- U=0 (for an ultrasound score of 0)
- U=1 (for an ultrasound score of 1)
- U=3 (for an ultrasound score of 2-5)
- The menopausal status is scored as:
  - 1= premenopausal
  - 3= postmenopausal
- The classification of postmenopausal is women who have had no periods for more than one year or women over the age of 50 who have had a hysterectomy
- Serum CA125 is measured in IU/ml and can vary between 0 to hundreds or even thousands of units.

Refer to specialist multidisciplinary team if RMI> 250

The majority of women with symptoms suggestive of ovarian cancer will not have the disease. The symptoms are non-specific and so are not sufficient to refer to secondary care on a cancer pathway alone.

Clinical examination, including pelvic examination, remains relevant, particularly if there is obvious abdominal distension or a palpable abdominal mass. However, in most cases further tests will be required. The NICE guidance recommends that serum CA125 should be the initial test followed by pelvic and abdominal ultrasound if the serum CA125 is abnormal (i.e. ≥35 IU/ml).

If both tests are abnormal, then these women should be referred on the two-week urgent referral pathway to the local specialist unit. The guidance recommends that these tests should be requested by GPs prior to definitive referral. Successful implementation of this guidance is dependent on adequate access to these tests being made available.

Compared with referring women with either an abnormal serum CA125 or ultrasound alone, this sequential combination reduces the number of women referred but increases the incidence of ovarian cancer in the referred population from about 1 in 100 to 1 in 26. Even so, this should still ensure that most women with ovarian cancer would be put onto the right pathway in a timelier fashion.

‘Serum CA125 should be the initial test followed by pelvic and abdominal ultrasound if the CA125 is abnormal’

**EXAMINATION AND INVESTIGATION**

Given the increased emphasis on symptom recognition this has to be combined with effective assessment to enable timely and appropriate referral onto the ovarian cancer pathway. Delayed or missed diagnoses are the most common reason for medicolegal claims in general practice. The challenge facing GPs is to find the ovarian cancer needle in the symptomatic haystack without flooding the secondary care cancer pathways.