INTRODUCTION AND BACKGROUND

Pancreatic Cancer UK’s Study for Survival, published in 2011, marked the first ever comprehensive mapping of pancreatic cancer in the UK.

The study drew on the experiences and views of over 1000 people living and working with pancreatic cancer. It also drew on the most current information available regarding rates of mortality and survival, as well as rates of referral to specialist pancreatic cancer centres and surgery - currently the only curative treatment for the disease.

Following on from the Study for Survival, Pancreatic Cancer UK launched the Campaign for Hope - which sets out two ambitious goals:

- To double five year pancreatic cancer survival rates within the next five years
- To move the NHS experience of pancreatic cancer patients from being one of the worst to one of the best

The Study for Survival provided an excellent starting point to identify what needs to be done to shift the appalling legacy of pancreatic cancer in the UK and to make a difference to the lives of all those affected by this disease. At the time of publication, we said that whilst there were a number of research efforts underway that would cast further light on pancreatic cancer symptoms and diagnosis, it could take a number of years before that evidence would be available.

However, since that time a number of important research initiatives have moved forward offering a more solid body of evidence to support decisions about what we might do to improve early diagnosis. In addition, the launch earlier this year of a review of the NICE referral guidelines on suspected cancer offers an important opportunity to improve the identification and management of patients with suspected pancreatic cancer.

Our aim with Pancreatic Cancer UK’s Early Diagnosis Summit was to build on these opportunities by bringing together a wide range of people with an interest in pancreatic cancer to review the most current information available and to identify practical actions that could be taken. It is one of a number of initiatives we are moving forward with that we hope will move us closer to our goals.

We know that the scale of change required to make this difference can only be achieved by working collaboratively with supporters and colleagues, including parliamentarians, policy makers, health care professionals, researchers and funders and other charities. Most importantly, by working with patients and their families and carers.

In this regard, we gratefully acknowledge the support and contribution of the 70 healthcare professionals, researchers, policy makers, charity representatives and patients, families and carers who freely gave their time to attend our summit and share their expertise and insight.

We also gratefully acknowledge the support of Paul Burstow, Minister of State for Care Services, for attending the summit and setting the scene for the day; Professor Bob Haward for his expert chairing and Professor Sir Mike Richards for leading an excellent discussion on the way forward.
EARLY DIAGNOSIS

Why does it matter?

Those who are diagnosed with pancreatic cancer face a poor prognosis – one and five year survival rates are 20% and around 4% respectively and many patients die within 6 months of diagnosis. Pancreatic cancer has a reputation for being difficult to diagnosis at an early stage – there are no simple tests or effective screening tools to detect the disease early, symptoms can vary, be non-specific and can also be attributable to conditions other than pancreatic cancer. Currently, most patients (about 80%) are diagnosed when the disease has already spread with no hope for curative treatment.

Despite these many challenges we believe that improving early diagnosis of pancreatic cancer is a worthy ambition for the following reasons:

- Detecting the disease before it has spread offers patients the only chance of long-term survival.
- For those with advanced disease, it can mean that patients may still be well enough to tolerate treatments that could slow down the progression of the disease and prolong their life.
- Importantly, earlier diagnosis may also allow more time to put in place measures to better manage symptoms and side-effects.
- Many pancreatic cancer patients currently miss out on opportunities to join clinical trials because they are not well enough to take part at the point that they are diagnosed. Earlier diagnosis may mean that more pancreatic cancer patients will be able to join clinical trials which are essential for the development of new and effective treatments for the future.

EARLY DIAGNOSIS SUMMIT

Summary

Pancreatic Cancer UK’s Early Diagnosis Summit set out to identify practical actions that could be taken to help clinicians in primary and secondary care to identify pancreatic cancer concerns earlier – and provide direction on what actions to take once a concern has been identified.

The focus of the summit was two-fold: firstly, to take stock of the most up-to-date research on pancreatic cancer symptoms and pathways to diagnosis. Secondly, to identify some practical actions that, if implemented, could help to improve early diagnosis.

The Early Diagnosis Summit format involved a series of quick-fire presentations in the morning with a view to bringing everyone up to speed on recent developments in pancreatic cancer. This included presentations on the potential of Endoscopic Ultrasound (EUS), trends in routes to diagnosis for pancreatic cancer patients, symptom research and developments on tools that could help clinicians pick-up pancreatic concerns earlier. Delegates were asked to draw on this information during afternoon breakout groups where they were tasked with identifying actions that could improve early diagnosis of pancreatic cancer.
A SUMMARY OF THE EVIDENCE

Quick-fire presentations

• There is a high level of support from GPs for improving early diagnosis - but low levels of confidence about being able to identify the signs and symptoms of possible pancreatic cancer in patients (Pancreatic Cancer UK, GP survey 2012)

• Half of pancreatic cancer patients are still diagnosed as a result of emergency admissions – twice that of all cancers combined (NCIN)

• Pancreatic cancer patients develop relevant symptoms and visit GPs on multiple occasions in year leading up to diagnosis – there is an opportunity to develop a pancreatic cancer algorithm (Dr Steve Pereira)

• Symptoms that make pancreatic cancer patients see their doctor include jaundice, systemic symptoms, eating problems and back pain. Some pancreatic cancer patients delay presentation for up to 3 months (Dr Lindsay Forbes)

• Although predictive values related to pancreatic cancer symptoms are small – apart from jaundice – they provide a basis for selection of patients for investigation, especially with multiple symptoms. The ultimate aim of the DISCOVERY research programme is to rewrite cancer diagnostic pathways for the UK (Professor Willie Hamilton)

• A symptom based approach towards pancreatic cancer is needed – rather than cancer based approach. GPs need to decide which patients (presenting with symptoms) to investigate. Decision support tool needs to mirror setting where decisions are made and account for multiple symptoms (Professor Julia Hippisley-Cox)

• There have been preliminary studies of the feasibility of use of EUS (Endoscopic Ultrasound) in screening of high risk populations (with serum CA 19-9) for early diagnosis. EUS has also been shown to be an effective tool in diagnosis and assessment of pancreatic tumours. Recent enhancements in technique and tissue analysis show great promise in improving understanding and therapeutic options in pancreatic cancer (Dr Nick Carroll)
**DISCUSSION**

**Key themes**

The following themes emerged from discussions throughout the day:

- The ongoing challenge that clinicians face with patients presenting with non-specific symptoms - and the lack of existing pathways for referral of those patients. Specifically, current referral pathways from primary care to secondary care are designed around specialist disciplines – patients with non-specific symptoms, like many pancreatic cancer patients, do not often fit neatly into a single area of specialist expertise.

- The need for better, quicker pathways for patients with symptoms that are of concern (i.e. jaundice – or where there is a high degree of suspicion of malignancy).

- The lack of mechanisms for consultation between primary and secondary care clinicians where a GP has concerns and would like the opportunity for an informal discussion about the patient - and actions that could be taken, including referral.

- The need for implementation of tools to support clinicians to identify patients where there may be some risk of pancreatic cancer – and to help quantify that risk and take decisions about the need for referral or other actions. (Risk Assessment Tools).

- The need to empower patients to return to see their GP if they have ongoing health concerns.

- The need to use existing information technology (for example, READ CODES) to improve/support GP decision making about patients.

- The need to consider how to best provide clinicians access to investigative and diagnostic tools: for patients with high malignancy concerns or with high risk factors – taking into account the need to ensure quality standards and the diverging views about direct access to CT scans.
SUMMARY OF RECOMMENDATIONS

• The Department of Health to undertake a review of local initiatives for new cancer pathways, and of options available, with a view to supporting implementation across the NHS of new pathways for cancer patients that have non-specific symptoms or where a GP has a general suspicion of malignancy. It is essential that new pathways are in place prior to the 2013 generic cancer symptoms awareness campaign.

• Risk assessment tools must also be integrated into primary care practice prior to the 2013 cancer awareness campaign. A NICE quality standard for pancreatic cancer – that includes a standard on risk assessment tools must be developed as a matter of urgency.

• Clinicians, working in primary and secondary care must take responsibility for making the best use of tools, resources and good practice guidance. This includes proper use of READ codes, implementation of safety netting practice and use of pancreatic cancer awareness and educational resources.

• The Cancer Diagnostics Advisory Board to urgently explore options for providing GPs with direct access to investigative and diagnostic tools. Pancreatic Cancer UK believes that with the right processes and support direct access for GPs could improve early diagnosis of pancreatic cancer. We would very much welcome a pilot direct access initiative to assess its implications and the opportunity to improve early diagnosis.

• The Department of Health must ensure that the 2013 cancer awareness campaign is undertaken in a way that supports early diagnosis of pancreatic cancer. This includes weight-loss as a symptom – it also includes ensuring that GPs are provided with information and education about pancreatic cancer and promoting resources and tools that have been developed by the charities working within the pancreatic cancer arena.
There was a significant degree of overlap in views about actions needed to improve early diagnosis throughout the proceedings. The following section groups this feedback under three overarching headings.

1. Pathways and collaboration

Development of new referral pathways was probably the single most recommended action that delegates felt if implemented could improve early diagnosis of pancreatic cancer. This included a call for new pathways from primary to secondary care for patients who do not fit neatly into existing specialist pathways. Specifically for patients presenting with persistent non-specific symptoms or patients for which a GP has a high degree of suspicion of an underlying malignancy. Provision of a “quick jaundice pathway” was also proposed – although not all delegates agreed that this would make a difference as patients with jaundice are almost always already referred on an urgent basis anyway.

Along the same lines, action to strengthen communication between primary and secondary care clinicians was strongly endorsed. In particular, mechanisms to enable GPs to get input and advice from secondary care clinicians to guide decisions about referral of patients or general management was viewed as a simple change that could make a significant difference. Proposals for named secondary care contacts that would be available to provide advice to GPs and the provision of an Upper GI hotline for GPs also received a high level of support from delegates.

2. Tools and resources

Delegates were unanimous about the need to provide tools to support clinicians to help identify patients that may have an increased risk of pancreatic cancer – or of cancer generally. Much mention was made of the need to make both the Risk Assessment Tool (RAT) developed by Professor Willie Hamilton and the QCancer Scores tool - developed by Professor Julia Hippisley-Cox, available to clinicians on an urgent basis.

There was also significant mention of the need for clinicians to make best use of the tools and resources that currently exist. This includes making sure that READ Codes are fully and accurately used (READ Codes are the basic means by which clinicians record patient findings and procedures in IT systems across primary and secondary care) and implementation of guidelines on safety netting for cancer diagnosis. Other recommended actions included the development of a set of pancreatic cancer 10 Top Tips for GPs and use of Peer Review to improve practice.

Finally, providing direct access to GPs to investigative and diagnostic tools, particularly to CTs scans, prompted considerable debate. Although there were wide ranging views, feedback from breakout groups as well as from our own post-summit survey, would suggest that there is a keen interest on the part of GPs to pursue further exploration of this option whilst taking into account the need to ensure appropriate levels of skill and support.
3. Awareness and Education

Direct reference to raising awareness was a less common theme, but a number of the breakout groups did strongly highlight the need to improve awareness amongst patients, primary care (including GPs and pharmacists) and secondary care clinicians – as well as allied health professionals. There was support for both raising awareness specific to pancreatic cancer, as well as for raising awareness of non-specific cancer symptoms. A number of groups also strongly advocated awareness raising with relevant health professionals of the link between diabetes and pancreatic cancer.

**PANCREATIC CANCER UK:**
*Post Early Diagnosis Summit GP Survey*

Following the Summit, Pancreatic Cancer UK undertook a further survey of GPs (June-July 2012) to test some of the specific proposals put forward. Overall, the 215 GPs that completed the survey were very supportive of the measures and actions proposed on the day. In relation to specific proposals for improving early diagnosis of pancreatic cancer, GPs rated the following as actions, that if implemented, they would find very helpful:

- Direct referral/ access to imaging or other investigative tools (45%)
- A specific referral pathway for patients with jaundice (44%)
- Referral pathways for patients with persistent, non-specific symptoms (37%)
- Access to specialist input for patients with Upper GI concerns, for example, a general hotline and/ or jaundice clinic (33%)
- More information for GPs about pancreatic cancer signs and symptoms (32%)
- Tools to help identify patients who may have a pancreatic cancer risk (30%)
RECOMMENDED ACTIONS

1. New pathways
Pancreatic Cancer UK strongly recommends implementation of measures to provide GPs options for dealing with patients who do not neatly fit into a specialist category or where there is a high degree of general suspicion about malignancy. As highlighted above, options could include the establishment of special clinics for patients with non-specific symptoms, secondary care hotline services for GPs and jaundice or Upper GI emergency clinics. Anecdotally, we are aware that there are some providers that have implemented these kinds of pathways locally – but there is little information available that provides insight into the extent of this activity and how successful these efforts have been.

We very much welcome the Department of Health’s initiative to develop a 2013 public cancer awareness campaign to raise awareness of generic symptoms, such as weight loss, that may indicate a cancer concern. We believe that this campaign could significantly help to improve early diagnosis of pancreatic cancer. However, we are very concerned that in the absence of new referral pathways for non-specific symptoms, and other avenues to seek advice about patients, the campaign could let both patients and their GPs down. Because of this, Pancreatic Cancer UK is calling for the DH to review existing pathway developments, as well as the range of possible options, with a view to supporting urgent implementation of new cancer pathways across the NHS. This needs to be undertaken prior to the 2013 cancer awareness campaign.

2. Tools and resources
Pancreatic Cancer UK welcomes the work being led by the Department of Health cancer team in partnership with CRUK, Macmillan Cancer Support and the National Cancer Action Team (NCAT), to promote the wider take up of cancer risk assessment tools. We are pleased to note the effort being undertaken to ensure the tools are ready for use, that GPs are trained to use them, that aftercare support is provided, and that their use is monitored and evaluated. Also, that some funding is being made available to support Cancer Networks who wish to promote and train primary care practitioners in the use of these tools.

However, we also believe that implementation of these tools within primary care must be secured prior to the planned DH cancer awareness campaign (2013) and that incentives are introduced for primary care to implement these tools. On that note, Pancreatic Cancer UK has been calling for some time for the development of a NICE quality standard on pancreatic cancer to help drive and measure priority quality improvements. We believe that the development of this quality standard - with the inclusion of a standard on risk assessment tools – is urgently required as it would provide a strong incentive for all clinicians.

Clinicians themselves also have responsibility to ensure that they are using the resources that are available to them to improve early diagnosis – this includes the proper use of READ codes to ensure that patient information is full and complete. It also includes implementation of good practice, like safety netting, to ensure that patients that may need further attention are dealt with - and feel that they have permission to return to their doctor should they have on-going concerns.

We are also calling for an urgent review by the Cancer Diagnostics Advisory Board to review options for enabling direct access for GPs to imaging and investigative tools. Whilst views from
delegates about direct access to CT scans varied – there was also support from the breakout groups in particular and our own post-summit survey for further exploration of this option. Pancreatic Cancer UK believes that with the right processes and support there is potential to facilitate safe and appropriate direct access to investigative and diagnostic tools to improve early diagnosis of pancreatic cancer. We suggest that one way forward would be to pilot a direct access to diagnostics initiative for pancreatic cancer with a view to evaluating the implications for additional training and processes and its impact on early diagnosis.

3. Awareness and education

We support the development of awareness and education campaigns for clinicians and patients. We are particularly keen that the Department of Health’s 2013 public awareness cancer campaign on generic symptoms be designed to ensure that it supports early diagnosis of pancreatic cancer – for example, by identifying unexplained weigh-loss as a symptom that people should take action on. We will work with the DH to ensure that the campaign is effective. We also support the proposal to shift the focus of the new NICE guidelines on referral of suspected cancer away from site-specific tumours to clusters of symptoms.

In addition, there is also much good work on awareness raising and health professional education being undertaken by all of the charities working within the pancreatic cancer arena. We strongly recommend that the DH and professional bodies representing clinicians continue to support and promote this work - and utilise available resources to the fullest to improve awareness and understanding of pancreatic cancer with all clinicians.

CONCLUSIONS

Based on the feedback from the Early Diagnosis Summit and response from our GP survey, Pancreatic Cancer UK recommends urgent action across all of the above fronts. We greatly welcome the move to support implementation of risk assessment tools in primary care. We also greatly welcome the Department of Health’s plan to run a symptom constellations cancer awareness campaign in 2013 to raise awareness of generic symptoms.

To ensure that these measures do improve early diagnosis of pancreatic cancer we must ensure that all GPs have access to – and implement within their practice – the use of risk assessment tools. We must also ensure that 2013 generic symptoms cancer awareness campaign includes symptoms that are relevant to pancreatic cancer, like unexplained weight loss and that all clinicians are provided with information and education about pancreatic cancer prior to the campaign. Importantly, it is essential that new pathways are established to ensure that GPs have genuine routes into secondary care for those patients where there are cancer concerns.

Our post-summit survey also shows that GPs clearly believe that direct access to diagnostic and investigative tools would be of great benefit - as would the provision of access to information about pancreatic cancer. Finally, we must ensure that patients are listened to and empowered to act on persistent symptoms and concerns.
APPENDIX 1:
Quick-fire presentations -
a detailed overview of the evidence presented

Evidence presented at the Early Diagnosis Summit highlighted the following:

1. There is a high level of support from GPs for improving early diagnosis - but low levels of confidence about being able to identify the signs and symptoms of possible pancreatic cancer in patients

Pancreatic Cancer UK, GP survey (2012)
Presented by Oswin Baker, Rockpool Research Associates, on behalf of Pancreatic Cancer UK

- Most GPs can list one or two pancreatic cancer symptoms – but half of GPs surveyed by Pancreatic Cancer UK were not confident that they could identify the signs and symptoms of possible pancreatic cancer in a patient
- Two-thirds (67%) of GPs believe that improving early diagnosis is very important and believe it would make a difference to many patients’ long-term future
- 80% believe that even if the disease is too advanced for curative surgery, there are still good reasons to diagnosis pancreatic cancer as early as possible
- To aid earlier diagnosis a quarter of GPs say the following would help: direct access to diagnostics (25%), more formal evidence of signs and symptoms of pancreatic cancer (nearly 20%)
- Just over 60% believe that providing information on clusters of symptoms (i.e. unexplained weight loss or jaundice) – rather than site specific symptoms – would support earlier diagnosis

2. Half of pancreatic cancer patients still diagnosed as a result of emergency admissions – twice that of all cancers combined

National Cancer Intelligence Network - Routes to diagnosis
Presented by Chris Carrigan, Head, National Cancer Intelligence Network

- About half of all pancreatic cancer patients are diagnosed as an Emergency Admission
  This is twice that of all cancers combined
- Diagnosis via Emergency Admission for pancreatic cancer increases with age
  increases for the most deprived
- Those diagnosed via Emergency Admission have poorer survival rates
3. Pancreatic cancer patients develop relevant symptoms and visit GPs on multiple occasions in year leading up to diagnosis – there is an opportunity to develop a pancreatic cancer algorithm

Pancreatic cancer symptoms – The Health Improvement Network (THIN) primary care database
Presented by Dr Steve Pereira, Consultant Gastroenterologist/Hepatologist, UCLH & RFH, London

THIN primary care database - GP records from 1st Jan 1999 to 31 Dec 2010. Anonymised data on over eight million patients, including 3,400 pancreatic cancer cases.

Initial results: 93% had relevant symptoms in two years prior to diagnosis.

Frequently reported symptoms: abdominal pain (39%), jaundice (36%), change in bowel habit (30%), dyspepsia (21%), nausea and vomiting (18%) and back pain (17%).

- Onset of symptoms: back pain 304 days, jaundice 70 days prior to diagnosis

- Summary: pancreatic cancer incidence rising; most patients develop relevant symptoms and visit GP on multiple occasions in year leading up to diagnosis. The development of an early referral algorithm is feasible and could lead to earlier diagnosis.

4. Symptoms that make pancreatic cancer patients go see their doctor include jaundice, systemic symptoms, eating problems and back pain. Some pancreatic cancer patients delay presentation for up to 3 months

Symptoms of pancreatic cancer - Nature and duration
Presented by Dr Lindsay Forbes, Clinical Senior Lecturer in Health Services research, King’s College London


- 113 pancreatic cancer patients completed questionnaire

- Results: symptoms that made patients go to doctor and led to diagnosis; jaundice (50%+); systemic symptoms (nearly 50%); eating problems (about 30%) back pain (about 20%)

- 14% delayed presentation to doctor for more than 3 months

- 36% said that something had put them off going to the doctor: 26 did not realise the symptoms were serious, 6 worried about wasting doctor’s time

- Summary: 14% of pancreatic cancer patients delayed presentation for more than 3 months; more than half of pancreatic cancer patients present with jaundice; nearly half present with systemic symptoms; people with back pain or abdominal pain most likely to delay presentation; nearly a quarter said that they did not realise the symptoms were serious.
5. Although predictive values related to pancreatic cancer symptoms are small – apart from jaundice – they provide a basis for selection of patients for investigation, especially with multiple symptoms. The ultimate aim of the DISCOVERY research programme is to rewrite cancer diagnostic pathways for the UK.

**Discovery: clinical features of pancreatic cancer in primary care**
Professor Willie Hamilton, Professor of Primary Care Diagnostics, Peninsular Medical School

- Almost all patients present with symptoms to primary care
- Average time from first GP visit to diagnosis 2007/08 – 52 days
- Risk of cancer can be quantitatively assessed in primary care based on age, symptoms and combinations of symptoms
- best test CT abdomen - not available to GPs

**Discovery:** Four new strands of research:

- **Positive predictive values for pancreatic cancer in men and women (aged over 60)**
  for individual risk factors and for pairs of risk factors (Study published in the British Journal of Cancer)
  Although predictive values small – apart from jaundice – they provide a basis for selection of patients for investigation, especially with multiple symptoms.

- **PIVOT study – patient survey of willingness to be investigated**
  Vignettes describing scenarios representing 1%, 2%, 5% or 10% risk of cancer - test and likely outcomes described. Patients asked would they like testing NOW or deferred. Also, asked willingness to pay questions.

- **Barriers to presentation (SYMPTOM study)**
  Study of reasons why patients with possible cancer choose to attend their GP (or are put off from doing so). Recruiting patients with possible pancreatic cancer – 4000 responses to questionnaire but relatively few pancreatic cancer patients. Qualitative arm with interviews.

**Pathways study**
This identifies the ‘routes to diagnosis’ in a large cohort of pancreatic cancer patients.
Starts at first symptom and maps in-house tests and imaging, plus referrals.

**Summary:** The ultimate aim of DISCOVERY is to rewrite cancer diagnostic pathways for the UK.
6. A symptom based approach towards pancreatic cancer is needed – rather than a cancer based approach. GPs need to decide which patients (presenting with symptoms) to investigate. Decision support tool needs to mirror setting where decisions are made and account for multiple symptoms.

Identifying patients at risk of pancreatic cancer in primary care
Professor Julia Hippisley-Cox, Professor of general Practice and Epidemiology, University of Nottingham

Q-scores – a new approach to identifying patients at risk of having cancer
Why pancreatic cancer?

- 11th most common cancer
- Less than 20% of patients eligible for surgery
- 84% of patients dead within a year
- Chances of survival better if diagnoses at an earlier stage
- Very few established risk factors
- Challenge is to identify symptoms in primary care

Symptoms based approach

- GPs need to decide which patients (presenting with symptoms to investigate)
- Decision support tool needs to mirror setting where decisions are made
- Symptom based approach is needed – rather than cancer based approach
- Must account for multiple symptoms

QCancer scores – what they need to do

- Accurately predict level of risk for individual patients
- Discriminate between patients w and w/o cancer
- Guide decisions on who to refer and urgency of referral
- Educational tool for sharing information with patients

Summary: QCancer currently predicts risk for 6 cancers
Lung, Pancreas, Kidney, Ovary, Colorectal, Gastro-oesph
7. There have been preliminary studies of the feasibility of use of EUS (Endoscopic Ultrasound) in screening of high risk populations (with serum CA 19-9) for early diagnosis. EUS has also been shown to be an effective tool in diagnosis and assessment of pancreatic tumours. Recent enhancements in technique and tissue analysis show great promise in improving understanding and therapeutic options in pancreatic cancer.

Dr Nick Carroll, Consultant Radiologist and Endoscopist, Addenbrooke’s Hospital NHS trust, Cambridge

Lesion detection:
EUS is superior to other imaging techniques in detection of malignant lesions of the pancreas particularly early lesions.

Obtaining tissue:
EUS FNA (fine needle aspiration) is the preferred technique for obtaining tissue diagnosis of pancreatic lesions. Failure to do so may result in false reassurance or false presumption of cancer diagnosis.

Although it may be acceptable in some centres to proceed to surgery on the basis of imaging in resectable cases the use of neo-adjuvant therapies will mean that all cases will require a tissue diagnosis not just those for non surgical management.

EUS FNA: The use of the material provided by EUS FNA as a core allows accurate tissue diagnosis and assessment of molecular markers and genetic expression for research and novel therapies.

Summary: There have been preliminary studies (USA) of the feasibility of use of EUS in screening of high risk populations (with serum CA 19-9) for early diagnosis.

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1 Safety-netting (NCAT)
In the majority of cases, patients present with vague symptoms, which may not be enough by themselves to drive a referral. However certain patient characteristics, alongside one or more symptoms, raise the likelihood of malignancy. Clinicians seem to agree that the main elements of safety netting are:

1. Communicating the existence of uncertainty
2. Outlining exactly what the patient needs to look out for
3. How to seek further help and
4. What to expect about time course