

## UK clinic allowed to screen embryos for rare bowel cancer

Zosia Kmietowicz *London*

Doctors in London have been given the go-ahead to screen embryos for a rare inherited form of bowel cancer after pressure from families affected by the condition.

The assisted conception unit at University College Hospital is the United Kingdom's first clinic to be granted a licence to perform pre-implantation genetic diagnosis (PGD) to select embryos that are free of the genetic mutation that leads to familial adenomatous polyposis (FAP).

Four couples affected by the condition, and who have a 50% chance of passing the mutated

gene to a child, will start treatment for the procedure at the end of the year. Until now, the only reproductive option for families carrying the FAP gene has been for the fetus to be tested for the condition during pregnancy, with the option of termination if it is found to have inherited the condition.

Familial adenomatous polyposis affects between 1 in 26 000 and 1 in 44 000 people in the United Kingdom. It leads to multiple rectal and colon cancers in early adulthood for almost all of those affected by the condition. Most opt to have prophylactic surgery to remove the colon, usually in their teens.

The new licence is the first time that doctors in the United Kingdom have been allowed to test for a genetic disorder that affects adults and which can be treated. Until now, clinics have been allowed only to screen embryos for untreatable conditions or conditions that affect children, such as Huntington's disease and cystic fibrosis.

The decision to grant the licence could have far reaching consequences, say observers. It could lead to fertility clinics being allowed to screen for other genes that increase the risk of cancer, such as the breast cancer genes BRCA1 and BRCA2. However,

inheriting mutations in these genes does not guarantee that cancer will develop.

Dr Ros Eeles, reader in clinical cancer genetics at the Institute of Cancer Research, said that screening for FAP was less controversial than for other cancers. "Everyone who inherits the FAP gene will get cancer and even if the bowel is removed there is a risk that they will get cancer in the upper gastrointestinal tract," she said. But granting of the new licence has been condemned by the pressure group GeneWatch UK, which monitors developments in genetic technologies. □

## England to start national bowel cancer screening programme

Susan Mayor *London*

A national screening programme for bowel cancer will be introduced in England from April 2006, the health secretary, John Reid, announced last week.

The government first announced its aim to introduce bowel cancer screening in the NHS plan in 2000. Pilots of a screening method based on looking for blood in stools then began in test sites in 2001, as a result of evidence that using this method could cut the death rate from bowel cancer by 15%. Two methods of screening were piloted—faecal occult blood testing, which looks for blood in stool samples, and flexible sigmoidoscopy, which allows careful examination of the bowel.

Results of the pilot studies showed that faecal occult blood testing would detect one or two bowel cancers for every 1000 people screened, with an additional three or four people having polyps removed that might

have gone on to develop into cancers. This could potentially prevent about 1200 deaths from bowel cancer each year in England. The trial looking at flexible sigmoidoscopy is still continuing.

The pilots showed high levels of acceptance of faecal occult blood testing, with uptake of close to the target of 60%, although rates were lower in men, those from more deprived areas, and those from certain ethnic groups.

A national screening programme based on faecal occult blood testing will be introduced in phases among men and women in their 60s from April 2006. Final decisions have still to be made on exact ages of participants.

In a similar way to the pilot studies, people will be sent a testing kit through the post. They will smear a small sample of stool onto a piece of card and send the card back to the testing

centre. Those testing positive for blood will then be further investigated with colonoscopy. It will be the first cancer screening programme in England to include men as well as women and one of the first national screening programmes for bowel cancer in Europe.

Professor Robert Souhami, director of policy and communication with Cancer Research UK, commented: "There is no doubt that bowel screening can save lives. Both flexible sigmoidoscopy and faecal occult blood testing offer considerable opportunities for early

detection and more successful treatment."

Announcing the £37.5m (\$69m; €54m) programme at the Britain Against Cancer conference last week, Mr Reid said: "Preventing cancer and improving services for those who develop the disease continues to be a priority for this government, and we have already made significant progress in reducing deaths from cancer." □

More information can be accessed at [www.cancerhelp.org.uk/help/default.asp?page=2816](http://www.cancerhelp.org.uk/help/default.asp?page=2816)



Character Diane Blackstock (above), of ITV's *Emmerdale*, is learning to live with a stoma bag after her operation for bowel cancer