Screening and Prevention of Uterine Cancers ?

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Risk factors for endometrial cancer

- Increasing age

- Being overweight
- Being diabetic
- Higher levels of oestrogen
- Higher level of insulin

- Menstrual factors – early menarche & late menopause
- Tamoxifen use
- Polycystic ovary syndrome
- Endometrial hyperplasia

- Family history

Risk factors for endometrial cancer
Can we reduce risk ?

- Increasing age

- Being overweight
- Being diabetic
- Higher levels of oestrogen
- Higher level of insulin

} Staying a healthy weight
Physical activity

- Menstrual factors – early menarche & late menopause
- Tamoxifen use
- Polycystic ovary syndrome
- Endometrial hyperplasia

Pregnancy & breast feeding

- Family history

Identification of risk & preventative measures

Screening for endometrial cancer in asymptomatic women

Transvaginal ultrasound
Endometrial sampling

?? Population / higher risk groups

Screening for endometrial cancer in asymptomatic women

"There is no evidence that screening asymptomatic women in the general population with transvaginal ultrasound scanning or endometrial sampling reduces the mortality from endometrial cancer"

BGCS guidelines

Although the use of ultrasound is sensible in women with post-menopausal or abnormal bleeding, in asymptomatic women there is an unacceptably high false positive rate & poor sensitivity.

Endometrial sampling may also be limited by acceptability and risk of discomfort, bleeding, infection.

Symptom awareness for all women

Women need to know the importance of reporting any post-menopausal or irregular bleeding to their GP.

Ultrasound & biopsy then become useful tools in evaluating these symptoms & making a diagnosis.

=> earlier diagnosis
=> better prognosis

Identification of women at high risk due to family history

Lynch syndrome or HNPCC (Hereditary non polyposis colorectal cancer)

Autosomal dominant genetic condition – may account for approx 5% of all endometrial cancers

Current genes include : MLH1, MSH2, MSH6, PMS2, EPCAM ? + others

Genetic investigations into a family will often begin by looking at tissue from an individual affected by cancer (MSI and/or IHC) and this may lead to blood tests to identify a germline mutation in one of the above genes.

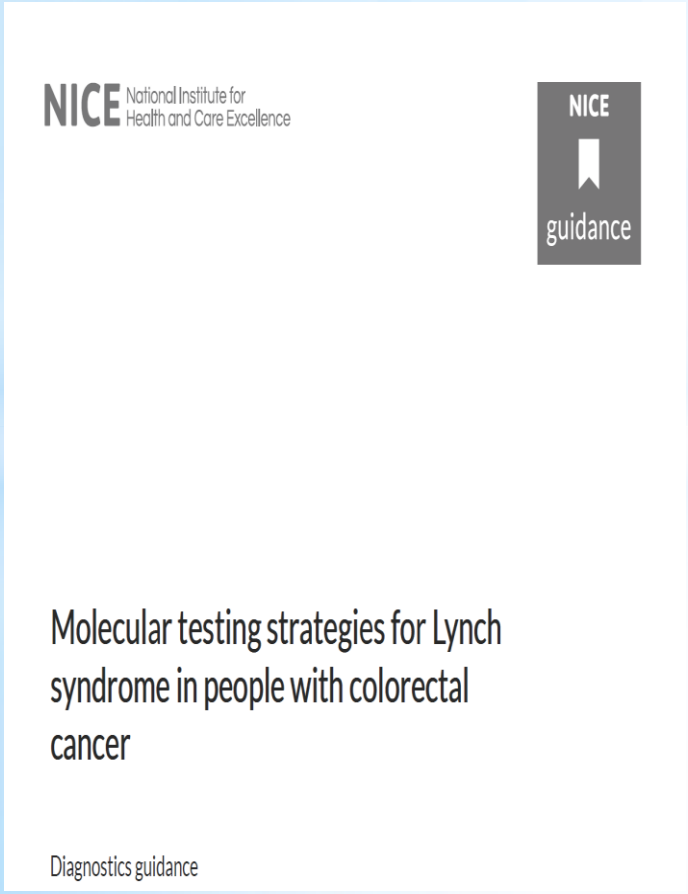
If this is successful then other family members can have predictive testing to see if they have inherited a faulty gene and are therefore at high risk of cancer.

Identification of women at high risk due to family history

Criteria for investigation of possible Lynch syndrome in a family :

- Colorectal cancer in an individual diagnosed < 50
- An individual with 2 cancers – including colorectal cancer and another associated tumour eg endometrial, ovarian, renal, gastric, biliary tract
- An individual with colorectal cancer plus a relative with either a colorectal or associated cancer (with one dx <50)
- An individual with colorectal cancer plus 2 relatives with colorectal or associated cancers at any age
- Two close relatives in a family – both affected by endometrial cancer

Identification of women at high risk due to family history



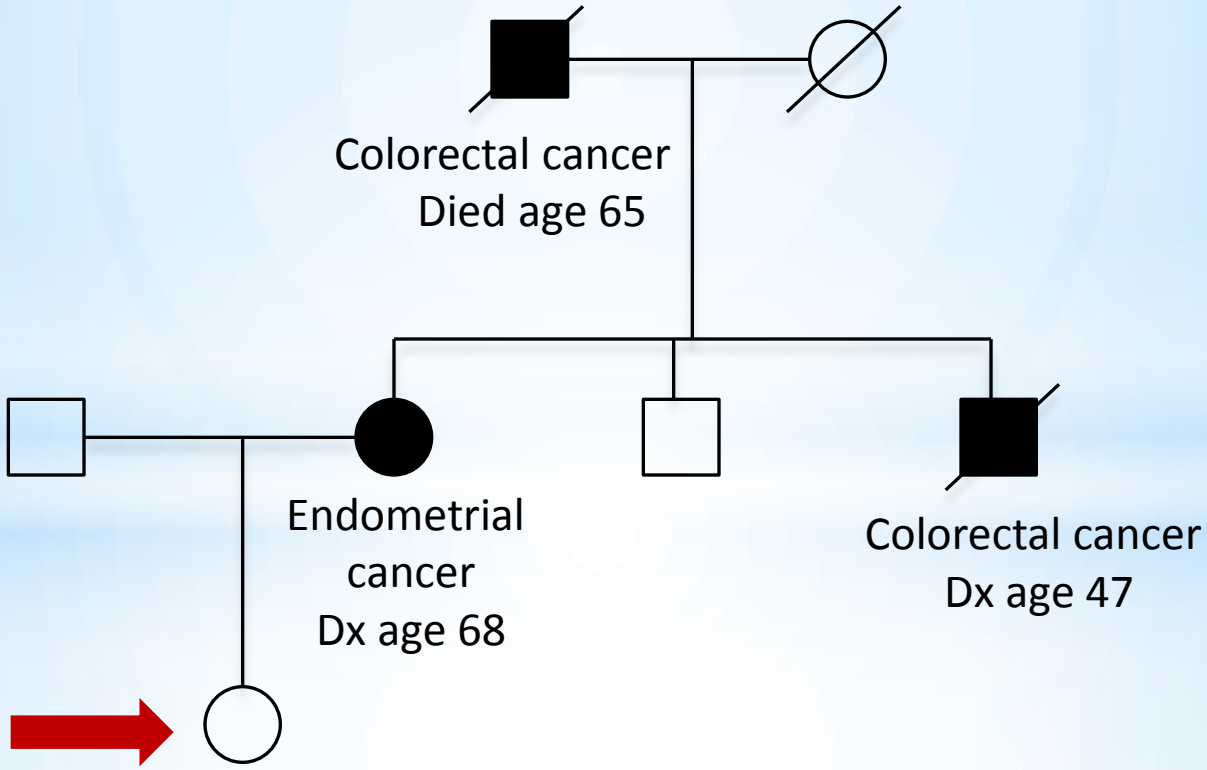
Beating Bowel Cancer UK – suggests approx 175,000 people in UK may have Lynch syndrome but most don't know it.

NICE guidelines from Feb 2017 suggest all cases of colorectal cancer should be tested for Lynch

Beating Bowel Cancer UK would like all colorectal cases diagnosed <50 to be offered testing

? Should we consider arguing for this for all endometrial cancers diagnosed < 50 ??
?? COST ??

Identification of women at high risk due to family history



Referrals can be addressed to the Familial Cancer Service at the Royal Derby Hospital or direct to the Gynaecological Family History Clinic (APSSC) – referrals can be from GP or other hospital consultant

Identification of women at high risk due to family history

Lynch syndrome – different genes carry different levels of risk

		Risk of cancer for gene carriers				
		All	**MLH1**	**MSH2**	**MSH6**	**PMS2**
Colorectal cancer	to age 50	13	14	20	3	3
	to age 70	35	41	48	12	15
Endometrial cancer						
	to age 50	**8**	**9**	**8**	**3**	**3**
	to age 70	**34**	**54**	**21**	**16**	**15**
Ovarian cancer	to age 50	3	4	4	2	2
	to age 70	8	20	24	2	2

Management of women at high risk due to family history

Screening

The efficacy of endometrial surveillance in lynch syndrome is still unproven. Both the British Gynaecological cancer society (BGCS) and the National Comprehensive Cancer Network in the USA (NCCN) accept that screening can be offered

BGCS: TVS and endometrial biopsy from the age of 35 years
NCCN: Endometrial biopsy every 1 or 2 years after counselling about the risks, benefits and limitations of screening

Although the BGCS included TVS in its screening regime, the NCCN suggest caution as interpretation of findings in premenopausal women can be difficult

- Importance of symptom awareness
- Role of risk reducing surgery

Management of women at high risk due to family history

Risk Reducing Surgery:

Although hysterectomy has not been shown to reduce endometrial cancer mortality it has been shown to reduce endometrial cancer incidence and thus patients should be considered for Hysterectomy and BSO.

One study of 315 women with Lynch syndrome found that no ovarian or endometrial cancer occurred in women who underwent risk-reducing surgery, whereas 33% of women who did not have surgery developed endometrial cancer and 5.5% developed ovarian cancer*

The timing of surgery depends upon whether the patients' family is complete, family history, co-morbidities and Lynch gene type.

* Schmeler, K.M., et al., *Prophylactic surgery to reduce the risk of gynecologic cancers in the Lynch syndrome*. N Engl J Med, 2006. **354**(3): p. 261-9.

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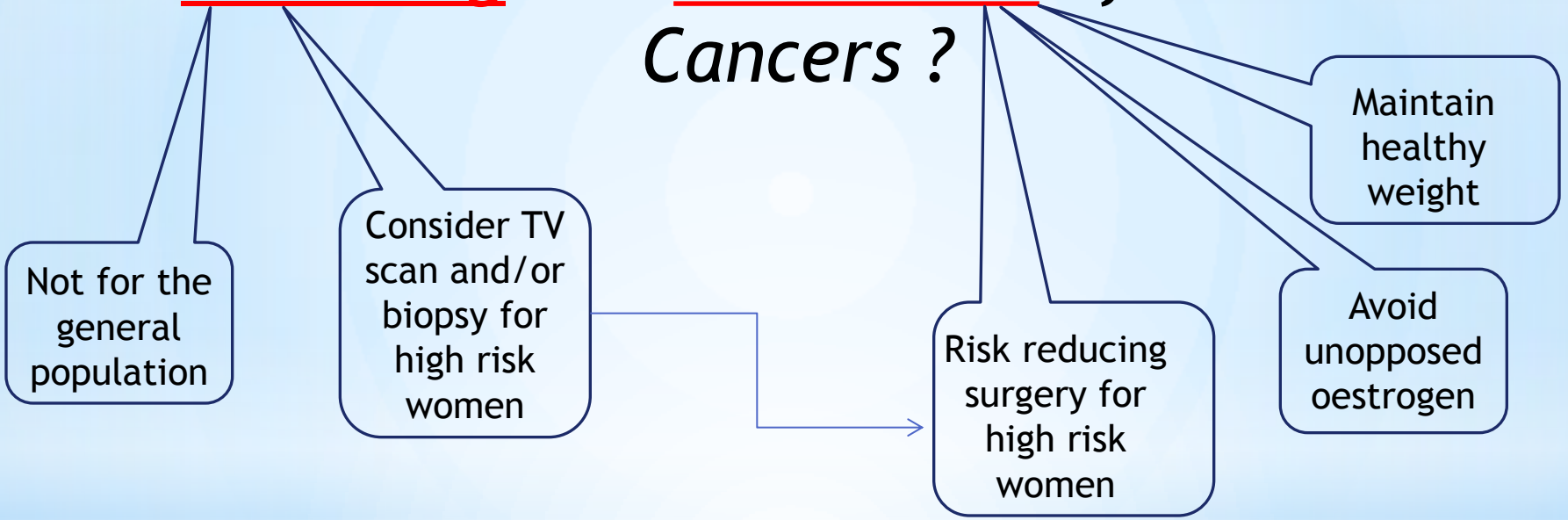

Identify women at high risk due to family history

Raise awareness of symptoms amongst all women

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Thank you

Any questions ??

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