



AUCKLAND, NEW ZEALAND

**INTERNATIONAL SOCIETY FOR  
GASTROINTESTINAL HEREDITARY  
TUMOURS (InSiGHT)**

20 - 23 March 2019

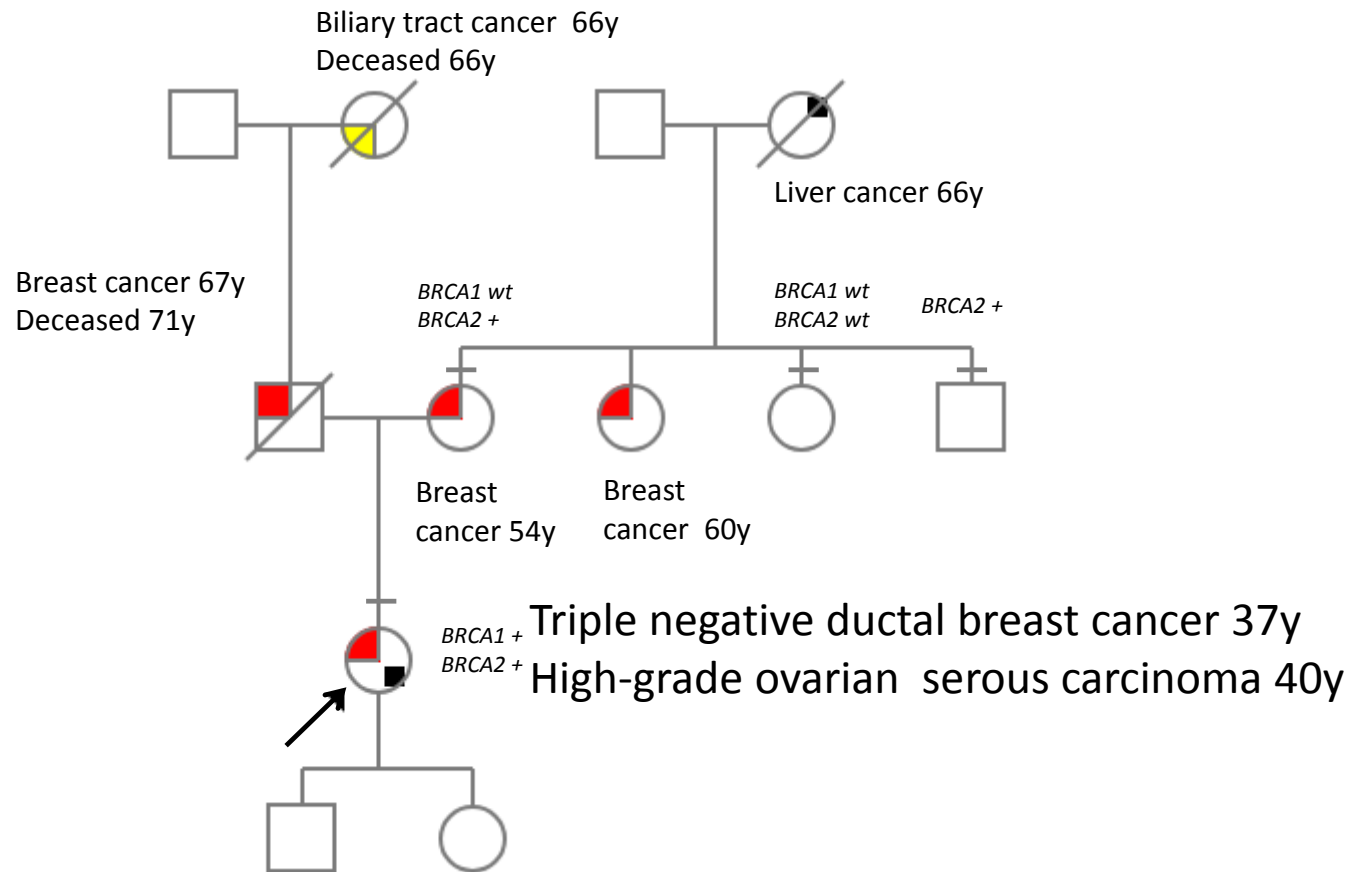
# Multiple Genetic Tumor Syndromes (MGTS): When to suspect them?



# MGTS cases (n = 6)

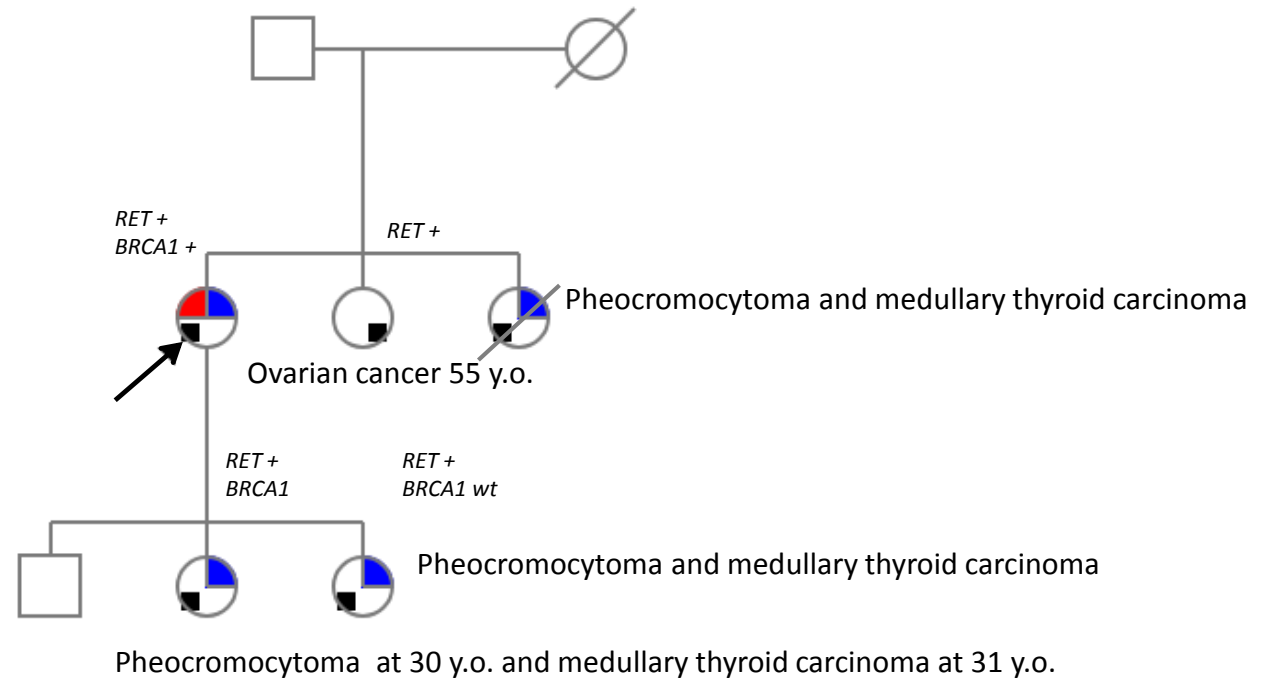
No.	Clinical manifestations- yrs at cancer diagnosis	PV#1	Reason for testing	PV#2	Reason for testing
1	Rectosigmoid adenocarcinoma- 52 Pancreatic adenocarcinoma - 54 <i>Macrocephaly</i>	<i>PTEN</i> c.165-18T>A	Phenotype	<i>BRCA2</i> c.7857G>A	Family history/ phenotype
2	Pleomorphic liposarcoma - 37 Dorsal leiomyosarcoma - 43 Colon cancer - 44 Synovial sarcoma - 46 <i>NF1 features: CLS, cutaneous neurofibromas</i>	<i>MSH2</i> c.(?_-68)_211+?del	Phenotype	<i>NF1</i> c.3314+1G>A	Phenotype
3	Triple negative ductal breast cancer - 37 High-grade ovarian serous carcinoma - 40	<i>BRCA1</i> del exons 16-17	Phenotype/N GS multigene test	<i>BRCA2</i> c.7007G>A	Phenotype/N GS multigene test
4	Neurofibromatosis type 1	<i>NF1</i> c.6579+1G>A	Phenotype	<i>RET</i> c.2410G>A	Predictive testing
5	Pheocromocitoma - 41 Medullary thyroid carcinoma- 41 Triple negative breast cancer - 46 & 61	<i>RET</i> c.1901G>A	Phenotype	<i>BRCA1</i> c.4964_4982del	Phenotype
6	No personal history of cancer	<i>FLCN</i> c.1285dupC	Predictive testing	<i>BRCA1</i> c.4327C>T	Predictive testing

# Case 3- female 40 years old



**BRCA1/2 testing → 1) BRCA1: deletion of exons 16-17**  
**2) BRCA2 c. 7007G>A**

# Case 5- female 62 years old

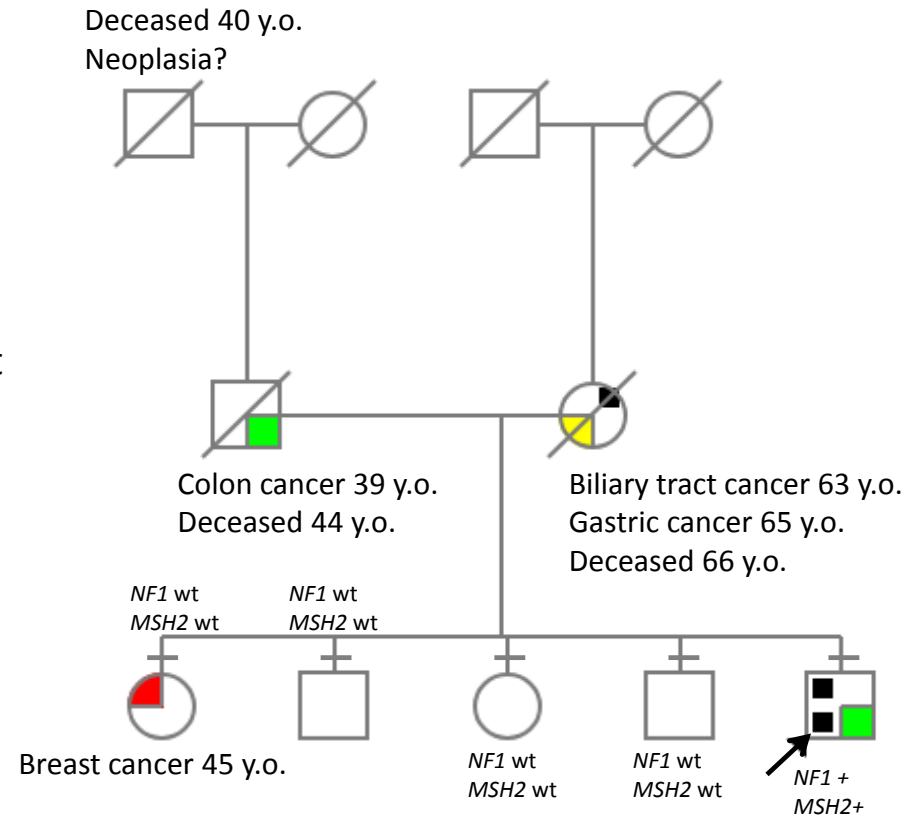


- 41y: Pheochromocytoma + medullary thyroid carcinoma
- 46y: triple negative cancer of the right breast
- 61y: triple negative cancer of the left breast

**BRCA1 c.4964\_4982del**  
**RET 1901G>A**

# Case 2- male 46 years old

- 37 yrs: pleomorphic liposarcoma of the left leg
- 43 yrs. dorsal leiomyosarcoma + 2 neurofibromas
- 44 yrs: mucinous colon adenocarcinoma
- 46 yrs: synovial sarcoma of the right leg
- Multiple cutaneous neurofibromas and café-au-lait spots with axillary lentiginosis
- MMR IHC: no expression of MSH2 and MSH6.
- *MSH2* → c.(?\_-6\_211+?)del



# Conclusions

Different phenotypic effects:

- Additive, independent (*BRCA2 + RET*)
- Predominance of one of the two CPGs (*BRCA1 + RET*)
- Multiplicative (*MSH2 + NF1*)

## Multilocus Inherited Neoplasia Alleles Syndrome A Case Series and Review

*JAMA Oncol.* 2016;2(3):373-379. doi:10.1001/jamaoncol.2015.4771  
Published online December 10, 2015.