



AUCKLAND, NEW ZEALAND  
**INTERNATIONAL SOCIETY FOR  
GASTROINTESTINAL HEREDITARY  
TUMOURS (InSiGHT)**  
20 – 23 March 2019



# Quality of and compliance with colonoscopy in Lynch Syndrome surveillance: are we getting it right?

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# INTRODUCTION

- Colorectal surveillance is only surveillance protocol in Lynch Syndrome (LS) proven to be effective.<sup>1,2</sup>
- Data on colonoscopic KPIs in LS is sparse.<sup>3,4</sup>
- What do we know?
  - Accelerated adenoma-colorectal cancer pathway<sup>5</sup>
  - Difficult to visualise non-polypoid, R sided lesions<sup>6</sup>
  - Interval ? 1-2 year recommended.<sup>7-9</sup>

<sup>1</sup>Jarvinen et al Gastroenterology 2000 <sup>2</sup> de Jong Gastroenterology 2006 <sup>3</sup>Newton et al Colorectal Disease 2014

<sup>4</sup>Haanstra et al Gastroenterology 2000 <sup>5</sup>Edelstein CGH 2011 <sup>6</sup>Rondagh Endoscopy 2013 <sup>7</sup>Mecklin Gastroenterology 2007

<sup>8</sup>Vasen Gastroenterology 2010 <sup>9</sup>Engel CGH 2010

St. Mark's Family Polyposis Registry

355 LS pts



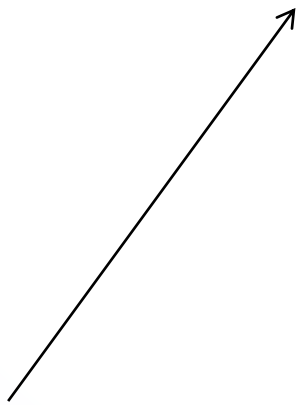
Wolfson Endoscopy Unit

149 attended  
endoscopy unit

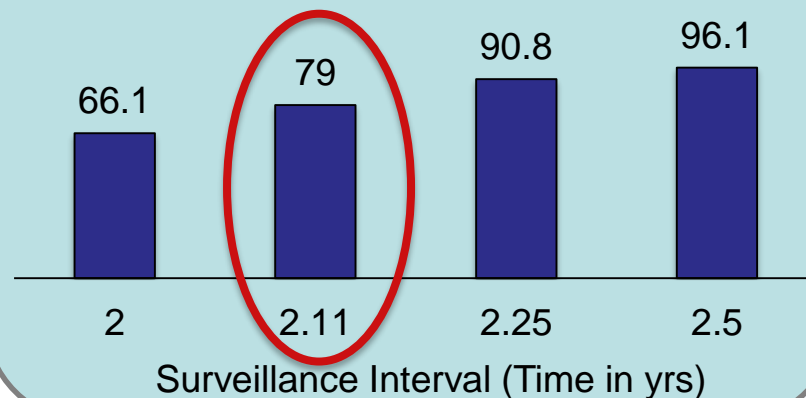
2007-2018



594 colonoscopies



% Colonoscopies Performed



# PATIENT DEMOGRAPHICS

<b>N=149</b>	
Male n, %	47 (31.5)
Gene positive or obligate carriers n,%	
MLH1	63
MSH2	51
MSH6	28
PMS2	7
EPCAM	0
CRC, prior to surveillance n, %	36 (24.2)
Age at index colonoscopy median, range(yrs)	44.2 (21.7-84.9)
Mean number of colonoscopies per patient, n	3.94

# COLONOSCOPY KPIs

<b>N=594</b>	
Caecal intubation rate (CIR), %	97.4
Optimal bowel prep, %	92.5
Adenoma detection rate, %	18.6
Mean number per colonoscopy	1.88
Sedation use, median	
Midazolam use (mg)	1.25 (0-5)
Fentanyl use (mg)	0 (0-100)

# CRC on SURVEILLANCE

N=9	
Location, %	
Distal	33.3
Proximal	66.6
Duke's stage, %	
A	77.8
B	0
C	22.2
Median age at CRC, yrs (range)	57.7 (32.7 -72.6)
Gene	<i>MLH1</i> 6 <i>MSH2</i> 3
Median interval from prev colonoscopy, yrs (range)	1.44 (0.12-2.09)
Adenoma resected in CRC segment, %	55.6
Previous CRC, %	50

# FINDINGS AFTER A NEGATIVE COLONOSCOPY† ...

N=	Interval after negative colonoscopy (y)	*Advanced adenoma n, (%)	Cancer n, (%)
356	median 1.55 (range 0.05-5.1)	14 (3.9)	2 (0.6)
275	≤2	8 (2.9)	1 (0.4)
105	≤1	3 (2.8)	1 (0.9)

† Negative colonoscopy = colonoscopy without polyps (adenomatous or SSL)

\*Advanced adenoma = ≥ one adenomatous polyp ≥10mm in diameter, villous component or high grade dysplasia

# MANAGEMENT OF ADVANCED ADENOMAS

Colon location	Size, mm	Villous comp	†HGD present	Follow-up, yrs	*Recurrence	Recurrence histology
HF	2	X		2.23	No	
AC	6		X	4.4	No	
Rectum	6	X	X	0.25	Yes	TVA with HGD
DC	10			2.12	No	
Rectum	10			1.99	Yes	TA with HGD
SC	10		X	Awaiting		
AC	10			4.4	No	
HF	10			2	No	
SF	10			3.11	No	
HF	10			2.3	No	
DC	10		X	3.3	No	

†HGD= high grade dysplasia

\*Recurrence = further adenoma/adenocarcinoma occurring in same colonic segment



# MANAGEMENT OF ADVANCED ADENOMAS

Colon location	Size, mm	Villous comp	†HGD present	Follow-up time, yrs	*Recurrence	Recurrence histology
Caecal	13	X	X	0.25	<b>Yes</b>	Adenocarcinoma
DC	15			1.84	No	
SC	15				No	
SC	15			3.63	No	
SC	20		X	>8.00	No	
SC	25			0.5	No	
TC	25			1.02	No	
AC	40			1.73	No	
TC	40		X	Not endo resectable	No	

# CHROMOENDOSCOPY IN LS

	<b>Chromoendoscopy</b>	<b>WLE</b>
N=	61	533
PDR, %	41.0	31.3
Mean no of polyps/patient, n	0.98	0.53
ADR, %	18	18.9
Mean no of adenomas/patient, n	0.39	0.31
R sided adenomas, n(%)	19 (79)	88 (53)

# CONCLUSION

- Despite good quality parameters, interval cancers still occurred
- Approximate 10-year rate of incidence CRC 8%
- Fortunately surveillance CRC were predominantly early (78% Dukes A)
- 95% of advanced adenomas were endoscopically resectable
  - 15% recurrence rate