

Why is co-morbidity important for cancer patients?

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Co-morbidity in cancer

- Definition:-

Co-morbidity is a disease or illness affecting a cancer patient in addition to but not as a result of their index (current) cancer.

Why is co-morbidity important for cancer patients?

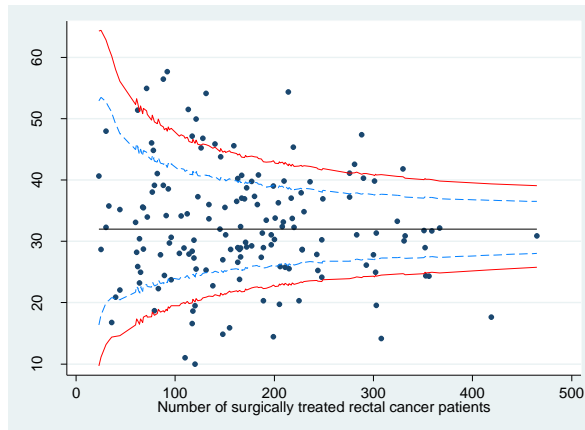
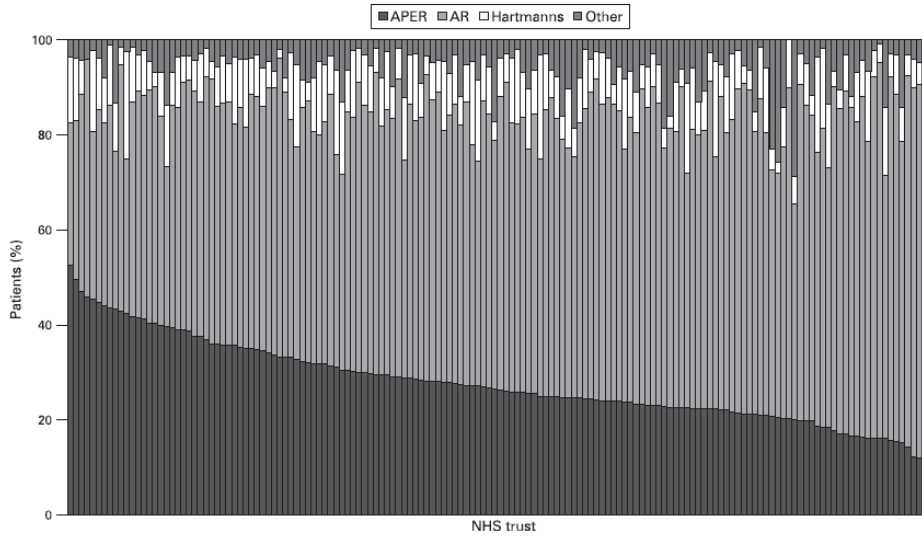
- Clinical decision making
- Risk adjusted outcomes analyses
- Highlighted in the CRS
 - Important but variably collected

What influences cancer decision making?

- Tumour factors
- Individual factors
 - *Patient preferences*
 - *Performance status*
 - *Frailty*
 - *Fitness*
 - *[Age]*
 - **CO-MORBIDITY**
- To predict outcome

Unacceptable variation in abdominoperineal excision rates for rectal cancer: time to intervene?

E Morris,^{1,2} P Quirke,² J D Thomas,^{1,2} L Fairley,⁴ B Cottier,³ D Forman^{1,4}




BBC NEWS | LIVE | BBC NEWS CHANNEL

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Rectal surgeons using 'wrong op'

Claims that many rectal cancer patients receive an "inappropriate" operation have been rejected by surgeons.

Leeds University researchers said hospital data showed the APE operation, which leaves patients with a permanent colostomy, was being used too often.

Surgery can leave a patient needing a colostomy

SEE ALSO

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- Fat hormone 'boosts colon cancer' 07 Apr 07 | Health
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RELATED INTERNET LINKS

- GUT
- Association of Coloproctology of Great Britain and Ireland
- Cancer Research UK

TOP HEALTH STORIES

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Main elements

- Selection for treatment
- Peri-treatment mortality and toxicity
- Impact on overall (population-based) survival / prognosis
- Late effects:
 - Predicting them
 - Identifying them
- Is it feasible to expect a single scale to answer all these questions?

When to record?

- **Prospective Recording**
 - Presence or absence?
 - Moderate or severe?
 - Type of co-morbidity present?
 - ACE-27
 - Other scale e.g. ASA?
- **Derive retrospectively**
 - HES – favours admitted care
 - Accuracy/completeness of coding
 - Less timely

Adult Co-morbidity Evaluation-27

prospectively recorded by MDT

- Chart-based comorbidity index for patients with cancer
- Developed through modification of the
Kaplan-Feinstein Comorbidity Index (KFI)
- Modifications were made through discussions with clinical experts and a review of the literature
- Validated in study of 19,268 cancer patients treated at Barnes-Jewish Hospital, USA

ACE-27

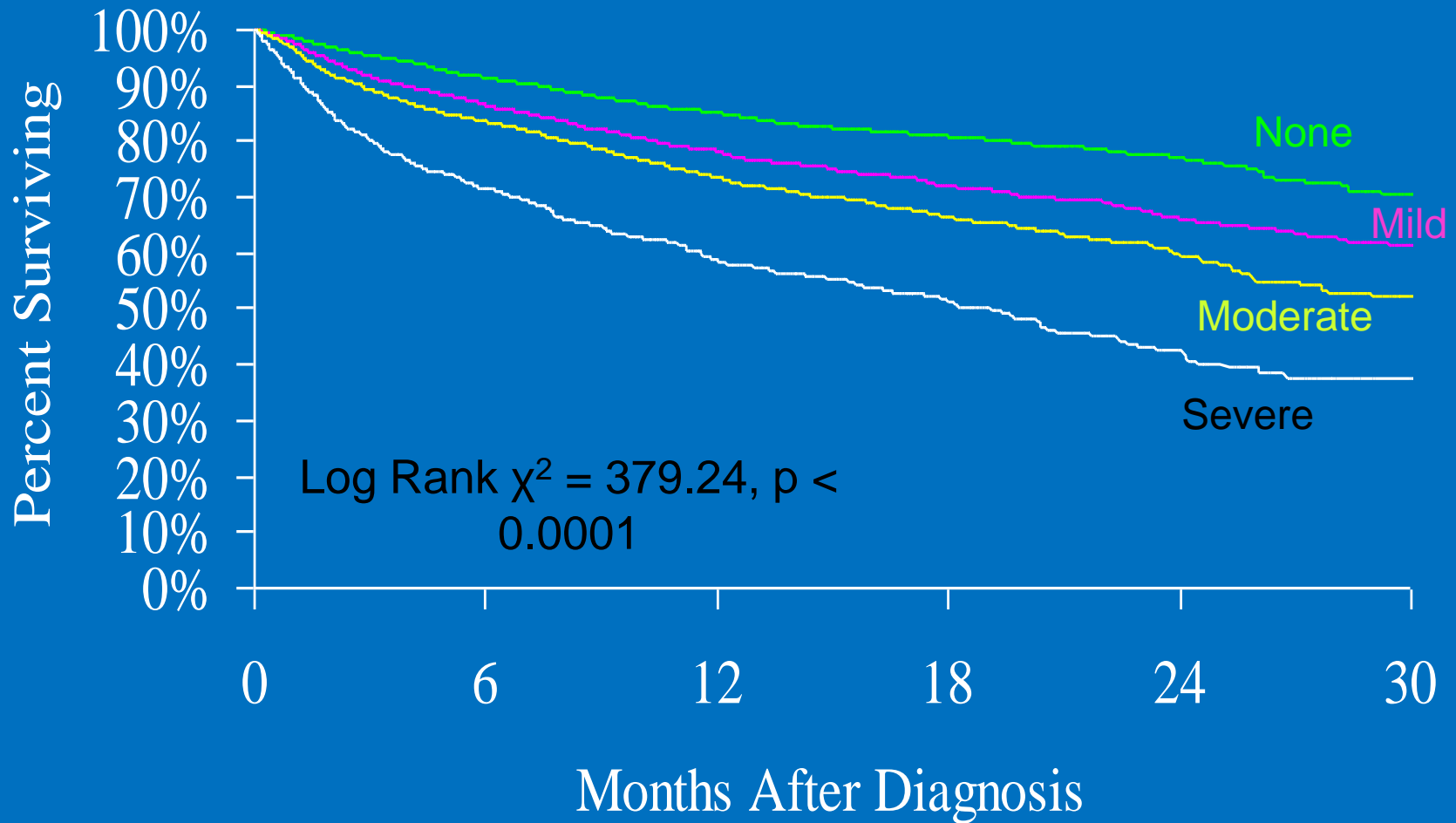
Cogent comorbid ailment	Grade 3 Severe Decompensation	Grade 2 Moderate Decompensation	Grade 1 Mild Decompensation
Cardiovascular System			
Myocardial Infarct	<ul style="list-style-type: none"> MI ≤ 6 months 	<ul style="list-style-type: none"> MI > 6 months ago 	<ul style="list-style-type: none"> Old MI by ECG only, age undetermined
Angina / Coronary Artery Disease	<ul style="list-style-type: none"> Unstable angina 	<ul style="list-style-type: none"> Chronic exertional angina Recent (≤ 6 months) Coronary Artery Bypass Graft (CABG) or Percutaneous Transluminal Coronary Angioplasty (PTCA) Recent (≤ 6 months) coronary stent 	<ul style="list-style-type: none"> ECG or stress test evidence or catheterization evidence of coronary disease without symptoms Angina pectoris not requiring hospitalization CABG or PTCA (>6 mos.) Coronary stent (>6 mos.)
Congestive Heart Failure (CHF)	<ul style="list-style-type: none"> Hospitalized for CHF within past 6 months Ejection fraction < 20% 	<ul style="list-style-type: none"> Hospitalized for CHF >6 months prior CHF with dyspnea which limits activities 	<ul style="list-style-type: none"> CHF with dyspnea which has responded to treatment Exertional dyspnea Paroxysmal Nocturnal Dyspnea (PND)
Arrhythmias	<ul style="list-style-type: none"> Ventricular arrhythmia ≤ 6 months 	<ul style="list-style-type: none"> Ventricular arrhythmia > 6 months ago Chronic atrial fibrillation or flutter Pacemaker 	<ul style="list-style-type: none"> Sick Sinus Syndrome
Hypertension	<ul style="list-style-type: none"> DBP ≥ 130 mm Hg Severe malignant papilledema or other eye changes Encephalopathy 	<ul style="list-style-type: none"> DBP 115-129 mm Hg Secondary cardiovascular symptoms: vertigo, epistaxis, headaches 	<ul style="list-style-type: none"> DBP 90-114 mm Hg DBP < 90 mm Hg while taking antihypertensive medications
Venous Disease	<ul style="list-style-type: none"> Recent PE (≤ 6 mos.) Use of venous filter for PE's 	<ul style="list-style-type: none"> DVT controlled with Coumadin or heparin Old PE > 6 months 	<ul style="list-style-type: none"> Old DVT no longer treated with Coumadin or Heparin
Peripheral Arterial Disease	<ul style="list-style-type: none"> Bypass or amputation for gangrene or arterial insufficiency < 6 months ago Untreated thoracic or abdominal aneurysm (≥ 6 cm) 	<ul style="list-style-type: none"> Bypass or amputation for gangrene or arterial insufficiency > 6 months Chronic insufficiency 	<ul style="list-style-type: none"> Intermittent claudication Untreated thoracic or abdominal aneurysm (< 6 cm) s/p abdominal or thoracic aortic aneurysm repair

<http://cancercomorbidity.wustl.edu/ElectronicACE27.aspx>

Using information to improve quality & choice



Prognostic Impact of Comorbidity



Charlson Score

derived retrospectively by analysts
based on information in notes coded
by clinical coders

Cancer Diagnosis

HES episodes 1 yr previous

time

HESID	DIAG_1	DIAG_2	DIAG_3	DIAG_4	DIAG_5
5494782	I211	T814	Y838	I802	
5494782					
5494782	D259	-			
5494782	K740	K528			
5494782	S679	-			
5494782					
5494782	D171	-			
5494782	H332	D569	Z853		
5494782	M720	-			

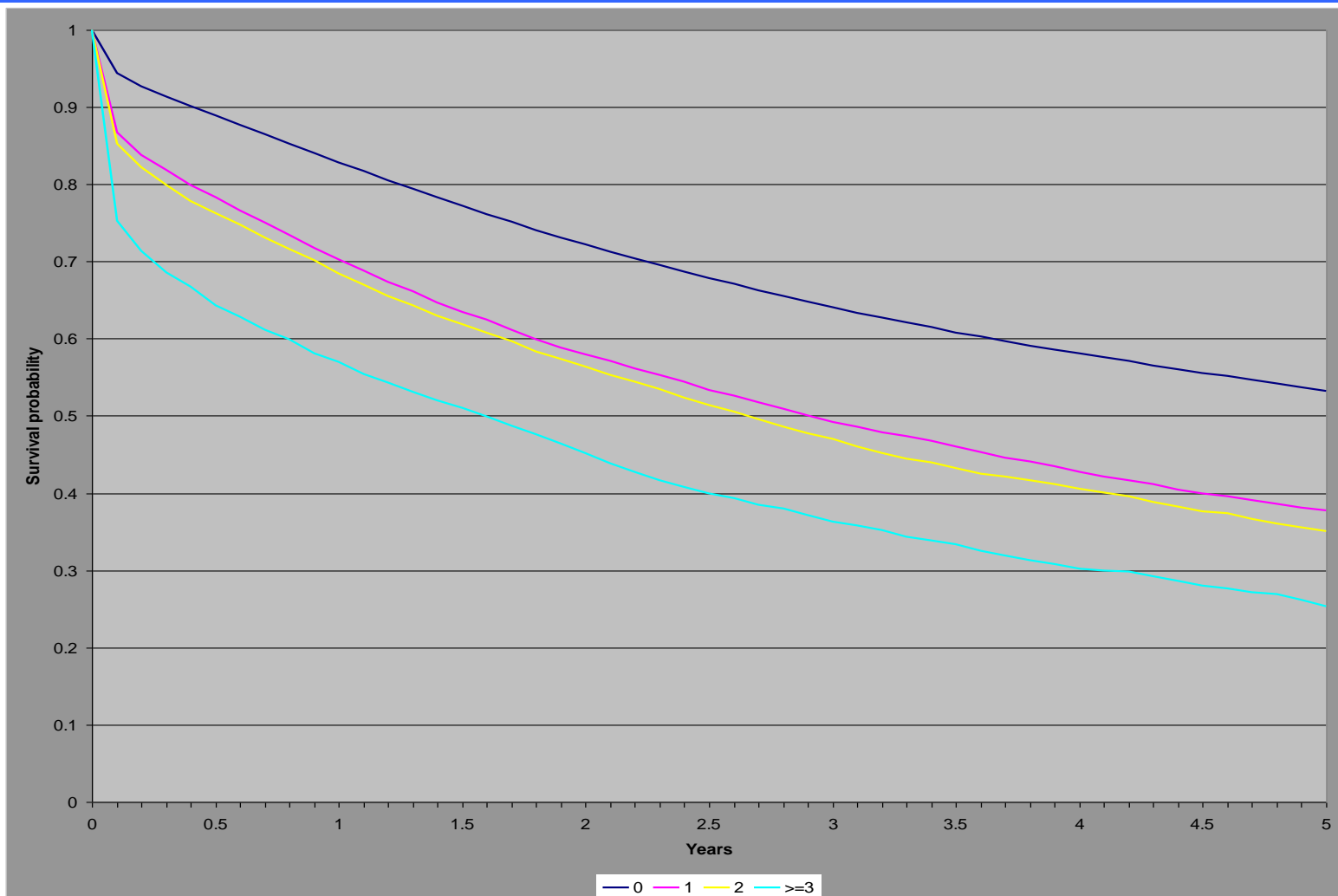
Charlson Group	Group Description	Score	Codes
1	Acute Myocardial Infarction	1	I21, I22, I25
2	Congestive Heart Failure	1	I09, I11, I15, I25, I42, I43, I50, P29
3	Peripheral Vascular Disease	1	I70, I71, I73, I77, I79, K55, Z95
4	Cerebral Vascular Accident	1	G45, G46, H34, I60-69
5	Dementia	1	F00-03, F05
6	Pulmonary Disease	1	I27, J40-47, J60-68, J70
7	Connective Tissue Disorder	1	M05-06, M31-36
8	Peptic Ulcer	1	K25-K28
9	Diabetes	1	E10-14
10	Diabetes Complications	2	E10-14
11	Paraplegia	2	G04, G11, G80-83
12	Renal Disease	2	I12-13, N03, N05, N18, N19, N25, Z49, Z94, Z99
13	Cancer	2	C00-76, C81-97
14	Metastatic Cancer	6	C77-80
15	Severe Liver Disease	3	I58, I85, I86, K71-72, K76
16	HIV	6	B20-22, B24
17	Liver Disease	2	B17-18, K70-71, K73-74, K76, Z94

Acute Myocardial Infarction	1
Liver Disease	2
Final Score	3

Complications

- Score is very dependent on date of cancer diagnosis
 - Differences in registration processes between registries
- Cancer diagnosis is often first in-patient episode
 - Only including episodes prior to diagnosis may miss co-morbidity codes
- Coding of Cancers differ in Registry/HES Meaning cancers can be counted twice
 - e.g. an individuals colorectal tumour could be coded as C18 in registry and C19 in HES, this could lead to
- Suspected cancer diagnosis coded in HES
 - 100% over-reporting of cancer diagnosis in HES
- Cancers and Metastatic Cancer make up main proportion of scores
 - Should any cancer information be used in the calculation of the score for cancer purposes.
 - Would it be better to use definitive data on multiple tumours/mets

Colorectal survival by Charlson Score



Using information to improve quality & choice

Conclusions

- NCDR has Charlson score available at individual tumour level
- Analysis needs to be undertaken to assess the best approach to calculating co-morbidity from data we have available
- Work with DH/CfH on national co-morbidity project
 - SSCRGs to define pertinent conditions

Workshop Action Plan

- **Recommend collection of ACE-27 co-morbidity score is mandated for all adult cancer patients**
- Ensure that appropriate training is delivered
- Research different collection methodologies e.g. patient questionnaires
- Identify where supplementary indices or information may be required
- Continue to retrospectively calculate co-morbidity scores from HES
- Consider establishing a Co-morbidity ‘CRG’

NCIN



national cancer
intelligence network

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Thank you

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