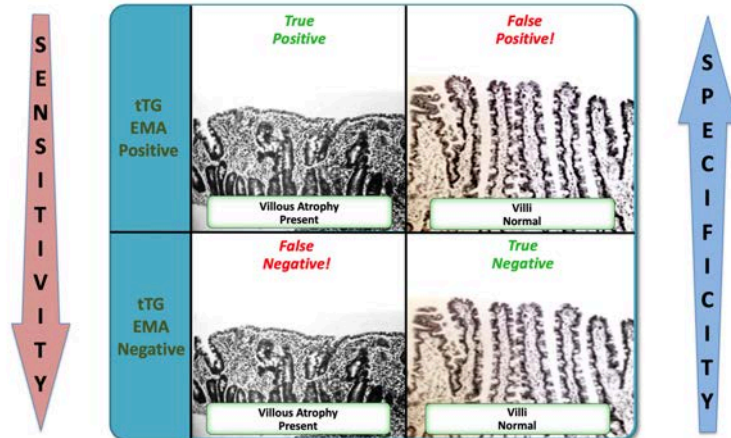


Tests for Serum Transglutaminase and Endomysial Antibodies Do Not Detect Most Patients With Celiac Disease and Persistent Villous Atrophy on Gluten-free Diets: a Meta-analysis

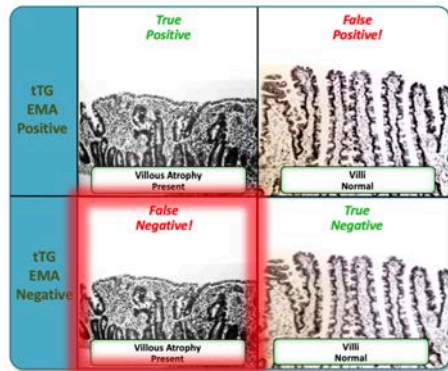
PATIENT STATUS	SEROLOGY	SENSITIVITY	SPECIFICITY
PATIENT WITH UNTREATED CD	tTG	95%	99%
	EMA	90%	95%
PATIENTS ON A GFD	tTG	50%	83%
	EMA	45%	95%

GREAT FOR SCREENING!

Tests for Serum Transglutaminase and Endomysial Antibodies Do Not Detect Most Patients With Celiac Disease and Persistent Villous Atrophy on Gluten-free Diets: a Meta-analysis



Tests for Serum Transglutaminase and Endomysial Antibodies Do Not Detect Most Patients With Celiac Disease and Persistent Villous Atrophy on Gluten-free Diets: a Meta-analysis



The **Majority of Patients** with VA on a GFD have normal levels of tTG or EMA.

High rates of **False Negative** antibody tests!

A positive antibody test is helpful - good specificity for persistent villous atrophy

A negative antibody test should **not be interpreted as an indicator of mucosal recovery or as a proxy for GFD adherence**

SYMPTOMS & RESPONSE TO THE GFD?

Masked bolus gluten challenge low in FODMAPs implicates nausea and vomiting as key symptoms associated with immune activation in treated coeliac disease

A. James M. Daveson¹ | Jason A. Tye-Din^{2,3,4,5} | Gautam Goel⁶ |

Aim: To establish acute gluten-specific symptoms linked to immune activation in coeliac disease

Outcomes: Coeliac Disease Patient Reported Outcome (CeD PRO) symptom scores (0-10)



The University Of Sheffield. **DIETETIC ASSESSMENT?**
(RD'S ARE THE OG'S OF ADHERENCE?!)

Sheffield Teaching Hospitals NHS Foundation Trust

"Original Gangster"

OG MEANING

- "OG" is a phrase that is often used in rap and hip hop culture. This later found its way into the internet and texting culture.
- The meaning of "original gangster" is someone who is from "the old school" or someone who has a depth of knowledge or experience. If new gangsters think they are tough, then "OGs" are many times tougher.

"An evaluation by a skilled dietitian or a nutritionist has been shown to be a highly effective method of assessing GFD adherence, compared to patients' self-report of adherence and serological markers"

Giacci (2002). *Digestion*, 66, 178-185. Leffler et al (2007). *Aliment. Pharmacol. Ther.* 26, 1227-1235.

The University Of Sheffield. **DIETETIC ASSESSMENT?**
(RD'S ARE THE OG'S OF ADHERENCE?!)

Sheffield Teaching Hospitals NHS Foundation Trust

Optimising delivery of care in coeliac disease – comparison of the benefits of repeat biopsy and serological follow-up.
L. M. Sharkey*, G. Corbett*, E. Currie†, J. Lee†, N. Sweeney* & J. M. Woodward*

50% of pts with ongoing VA were presumably ingesting gluten that could not be detected their dietitians despite investigation.

There is no standardization or quality control for dietetic review.

There is no evidence dietetic review can be substituted for a biopsy to predict mucosal damage.

Persisting villous atrophy

Gluten contamination dietary advice
N = 65

Normal mucosa N = 14 Minor changes N = 15 Ongoing VA N = 36

Patients Had x3 Biopsies – Baseline, Follow up & Post Further RD Advice

Sharkey et al. (2013). *Aliment. Pharmacol. Ther.* 38, 1278-1291.

The University Of Sheffield. **HOW TO DETERMINE DIETARY APPROACH**

Sheffield Teaching Hospitals NHS Foundation Trust

Discharge to Primary Care?

No Symptoms & Normal Duodenal Biopsy

Symptoms & Normal Duodenal Biopsy

No Symptoms & Abnormal Duodenal Biopsy

Symptoms & Abnormal Duodenal Biopsy

Functional Symptoms Approach

Gluten Ingestion? Establish Standard Diet or **'Hyper-Sensitive' Patient Approach**

The University Of Sheffield. **GLUTEN TOLERANCE THRESHOLDS – A MOVEABLE FEAST?**

Sheffield Teaching Hospitals NHS Foundation Trust

RESEARCH ARTICLE Open Access

Trace gluten contamination may play a role in mucosal and clinical recovery in a subgroup of diet-adherent non-responsive celiac disease patients
Justin R Holton¹, Pamela A Cureton^{2,3}, Margaret L Martin², Elaine L Leonard Puppe² and Alessio Fasano³

Part of celiac population still at risk despite current gluten thresholds
I.D. Bruins Slot^{1,2}


Alimentary Pharmacology & Therapeutics

Systematic review: tolerable amount of gluten for people with coeliac disease
A. K. AKOBENG & A. G. THOMAS

REVIEW ARTICLE

Gluten in Celiac Disease—More or Less?
Inna Spector Cohen, M.D.^{1,4}, Andrew S. Day, M.D.¹, and Ron Shaoul, M.D.^{1,4*}

GLUTEN TOLERANCE THRESHOLDS – A MOVEABLE FEAST?



visual approximation of 10 mg of gluten from wheat toast

“As is true for many other biological reactions, the cut-off levels are relative and reflect the patient’s sensitivity to the offending agent.”

Lerner et al (2020) *BMC Medicine*, 18, (1), p. 70

Part of celiac population still at risk

Trace gluten mucosal and diet-adherent patients

Systematic gluten free

A. K. AKOBEN

PATIENTS ON A GFD STILL INGEST GLUTEN

Determination of gluten consumption in celiac disease patients on a gluten-free diet

Jack A Syage, Clarán P Kelly, Matthew A Dickason, Angel Cebolla Ramirez.

Results

- Meta-analysis GIPs in stool & urine in CD / non-CD populations
- Stool - Daily Gluten 244 mg
Urine – Daily Gluten 363 mg
- 3% - 19% of patients consumed > 600 mg of gluten on a daily.
- Data suggests patients on GFD cannot avoid accidental gluten intrusions

Most Patients With Celiac Disease on Gluten-Free Diets Consume Measurable Amounts of Gluten

Gastroenterology 2020; ■:1–3
Jocelyn A. Silvester, Isabel Corvino, Clarán P. Kelly

Results

- Food samples were tested using GlutenTox ELISA Sandwich
- Gluten Immunogenic Peptides Stool and Urine
- Food Samples 40% >20 ppm
20% >200 ppm gluten
- GIPs 6% urine samples 11% stool samples from 5 participants

RESEARCH ARTICLE Open Access

Safety of occasional ingestion of gluten in patients with celiac disease: a real-life study.
Luca Elli¹, Karla Bascañán^{1,2}, Lorenzo di Lernia³, Maria Teresa Bardella¹, Luisa Doneda⁴, Laura Soldati³

“Evaluated CD patients reporting voluntary and occasional transgressions to their GFD.”

CD patients interviewed in the study period n=1,378

CD patients reporting a voluntary gluten ingestion n=109

CD patients following a strict gluten free diet with a duodenal biopsy n=149

patients completing the frequency food questionnaire FFQ n=48

Capsule enteroscopy n=30

Duodenal biopsy n=75 (35 with FFQ)

Patients Underwent:

- ✓ Clinical Examination
- ✓ Blood Tests
- ✓ Duodenal Biopsy
- ✓ Capsule Enteroscopy
- ✓ Food-frequency Questionnaire

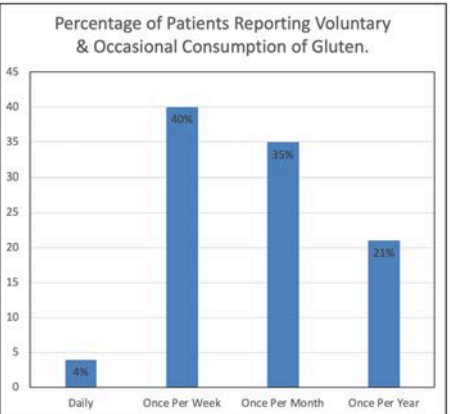
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Safety of occasional ingestion of gluten in patients with celiac disease: a real-life study.
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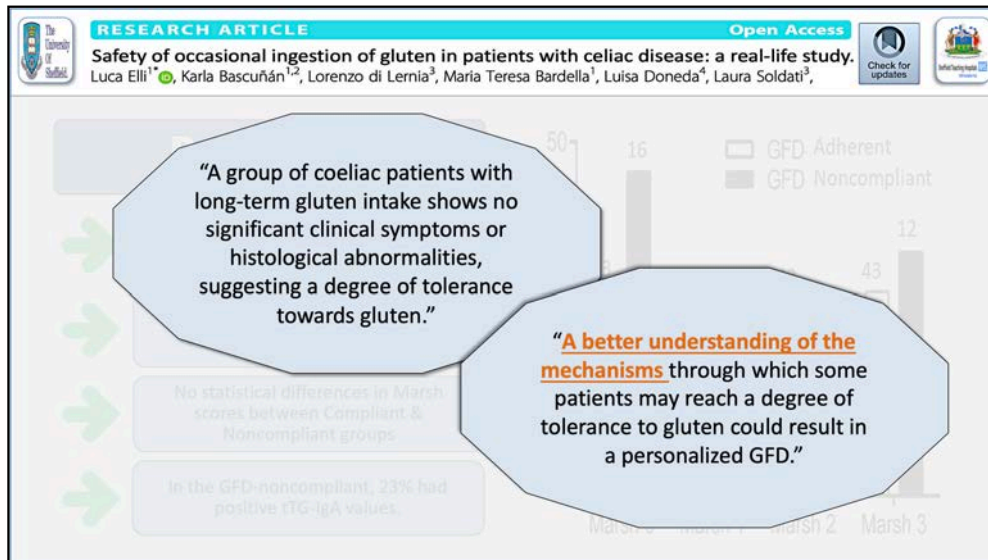
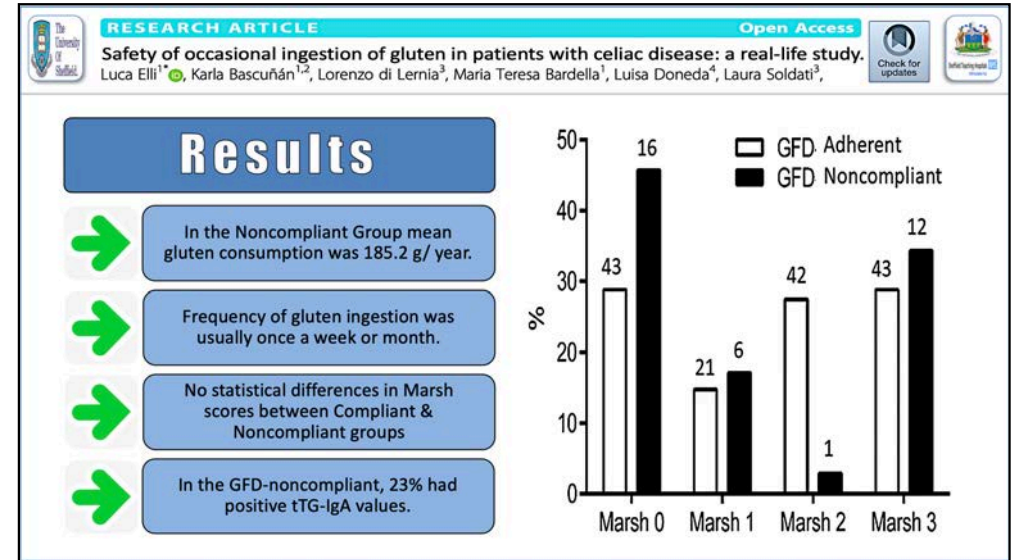
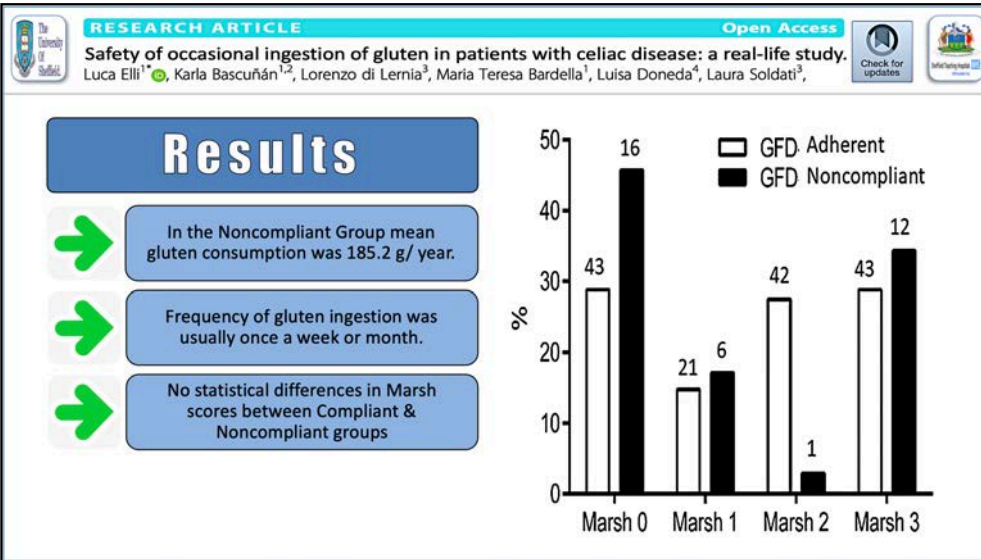
Results

- In the Noncompliant Group mean gluten consumption was 185.2 g/ year.
- Frequency of gluten ingestion was usually once a week or month.

Percentage of Patients Reporting Voluntary & Occasional Consumption of Gluten.



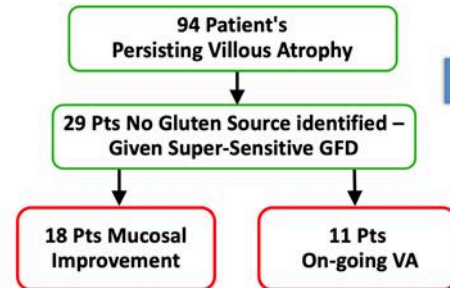
Frequency	Percentage
Daily	4%
Once Per Week	40%
Once Per Month	35%
Once Per Year	21%



DIET APPROACHES FOR THE 'HYPER-SENSITIVE' PATIENT

Optimising delivery of care in coeliac disease – comparison of the benefits of repeat biopsy and serological follow-up.

L. M. Sharkey*, G. Corbett*, E. Currie†, J. Lee†, N. Sweeney* & J. M. Woodward*



“The current standards, define gluten-free food as containing less than 20 parts per million. **The majority of cases reported in this study were subject initially to less stringent standards (up to 200 ppm).”**

Sharkey et al. (2013). *Aliment. Pharmacol. Ther.* 38, 1278–1291.

DIET APPROACHES FOR THE 'HYPER-SENSITIVE' PATIENT

Gluten Contamination Elimination Diet (GCED)



- ⊘ Grains (except Rice)
- ⊘ No Processed Foods
- ⊘ No Dairy (for 1st four weeks)
- ✓ Fresh fruits, vegetables
- ✓ Fresh meats, poultry, fish
- ✓ Oils, vinegar, honey and salt
- ✓ Fruit/vegetable juices, milk, water, & GF supps

1,288 patients with CD
 2005 to 2011; 29 (2.3%) patients - GCED
 17 compliant patients
 14 patients Mucosal Recovery
 11 patients returned to traditional GFD

Hollon et al (2013) *BMC Gastroenterology*, vol. 13, (1), p. 40

DIET APPROACHES FOR THE 'HYPER-SENSITIVE' PATIENT

nutrients

Article

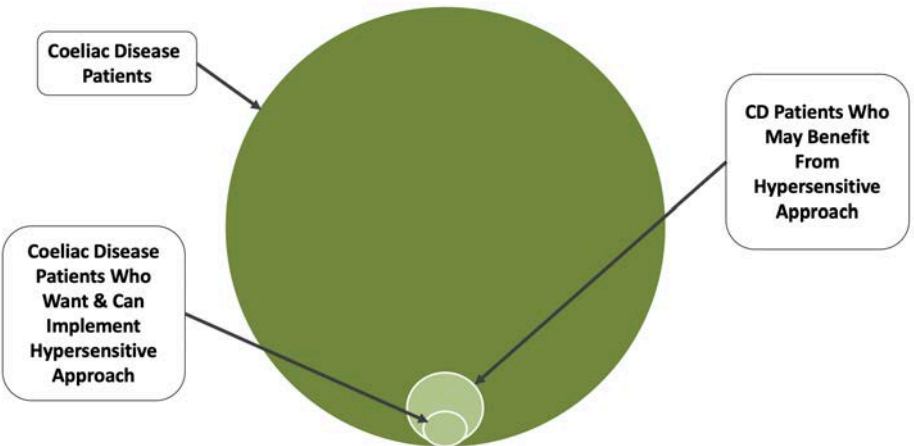
Indications and Use of the Gluten Contamination Elimination Diet for Patients with Non-Responsive Celiac Disease

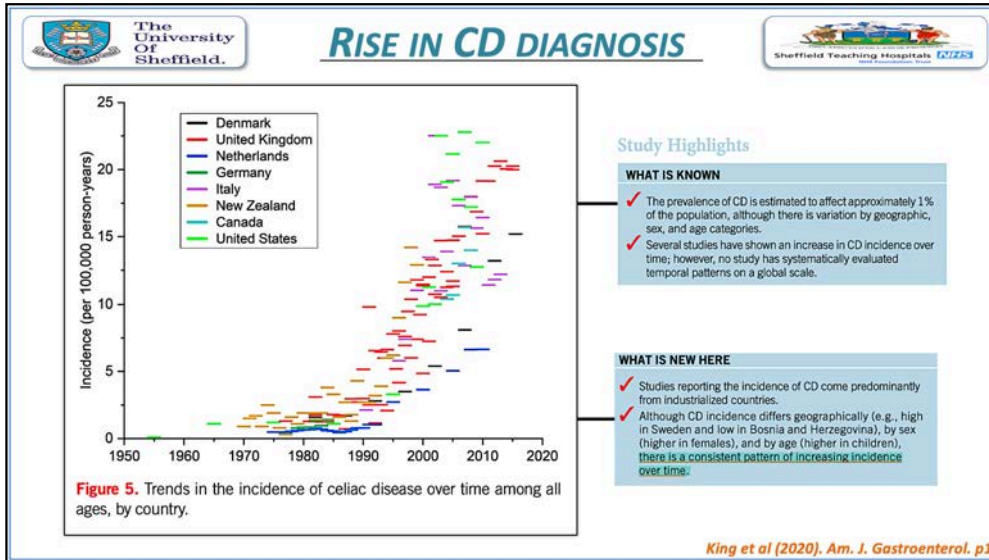
Maureen M. Leonard ^{1,*}, Pamela Cureton ^{1,2} and

Table 2. Use of the gluten contamination elimination diet.

Indications for Use	Not for Use
Diagnosis of celiac disease is confirmed.	Diagnosis of celiac disease is not confirmed.
Patient has been on a gluten-free diet for 12 months.	Patient has non-celiac gluten sensitivity.
Patient has been seen by a dietician to review the diet for possible gluten exposure.	Patient has not been on a gluten-free diet for 12 months.
Patient has Marsh 3 damage on repeat small intestinal biopsy with or without elevated celiac antibodies.	Patients has Marsh 2 damage on repeat endoscopy in the presence of normal serology and no signs or symptoms associated with CD.
Proper education, support, and follow-up can be provided over the next 3 months.	Patient has Marsh 0-1 damage on repeat small intestinal biopsy with or without elevated celiac antibodies.
May consider use on a case by case basis for patients with persistent symptoms, elevated serology, and Marsh 2 damage on repeat small intestinal biopsy.	

'HYPER-SENSITIVE' APPROACH WORKS FOR THOSE WHO WANT IT?





The University Of Sheffield **Dietetic Provision in Coeliac Care.** **Sheffield Teaching Hospitals NHS Foundation Trust**

“It is important newly diagnosed patients have thorough education of a gluten-free diet, including advice on diet practicalities, from a dietitian with expertise in coeliac disease.”
ACG Clinical Guidelines

“It is important that a dietitian with a specialist interest in coeliac disease should play a significant role in their care and follow-up.”
NICE Clinical Guidelines

UK Nelson M et al (2007). *J. Hum. Nutr. Diet.* 20(5):403-11

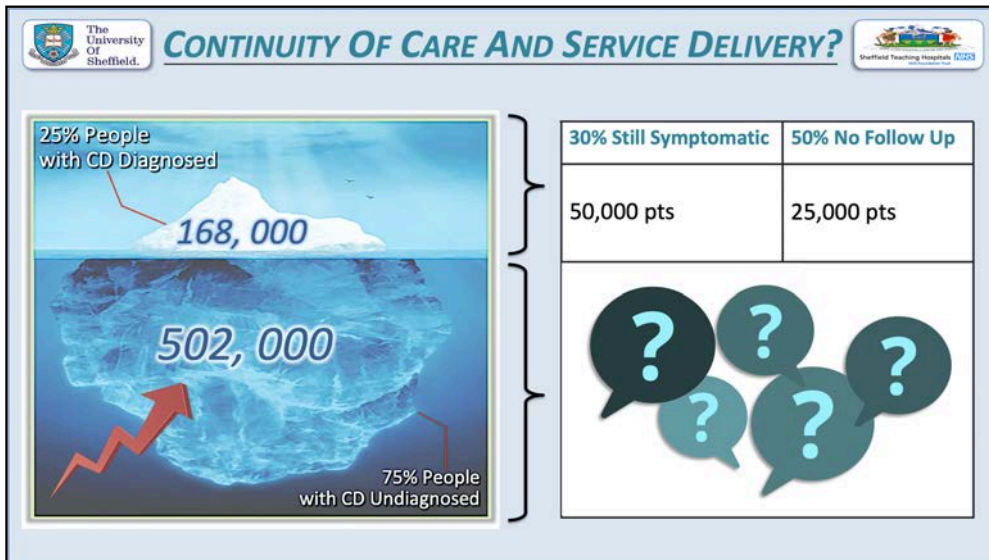
- ↳ Level of dietetic provision 1/3 of BSG management guidelines
- ↳ > 1/3 patients not any Dietetic input

AU Halmos, et al (2018). *Aliment. Pharmacol. Ther.* 48(1):78-86

- ↳ > 1/3 patients not any Dietetic input
- ↳ ≈ 40% patients not adherent to the GFD
- ↳ ≈ 40% were also restricting another food component

UK Unpublished UK Data (2019)

- ↳ 40% of dietetic departments offered only 15-30min consultation's
- ↳ >50% had no specific pathway for Coeliac Disease patients



The University Of Sheffield **Royal Hallamshire Academic GI Unit** **Sheffield Teaching Hospitals NHS Foundation Trust**

Research

- BSG Hopkins Endoscopy Prize 2012 Small Bowel Endoscopy
- Cuthbertson Medal 2011 Nutrition Society & BAPEN (British Association of Parenteral & Enteral Nutrition)
- ASNEMGE
- European Rising Star Award 2010 Association of National European & Mediterranean Societies of Gastroenterology

Clinical

- 2011 Small Bowel Endoscopy
- 2014 Primary Care Services & GI Bleed Unit
- Patient Safety CARE Award 2012
- Health Service Journal Awards 2012 Gastroscopy/PEG Feeding Service
- Coeliac UK 2010 Patient Healthcare Award
- Complete Nutrition 2013 Coeliac Healthcare Award
- Complete Nutrition 2016 Coeliac Professional of the Year
- Medipex Award 2013 Small Bowel Endoscopy



Royal Hallamshire Academic GI Unit



Research

Clinical



BSG Hopkins Endoscopy Prize 2012
Small Bowel Endoscopy



Cuthbertson Medal 2011
Nutrition Society & BAPEN
(British Association of Parenteral
& Enteral Nutrition)

ASNEMGE

European Rising Star Award 2010
Association of National European &
Mediterranean Societies of Gastroenterology

Medipex Award 2013 Small Bowel Endoscopy

DATE FOR THE DIARY!

International Coeliac Disease Symposium

ICDS

SHEFFIELD 2023!

