Advancing the availability of clinical insight to improve patient care: ClinicalKey

Gaynor Jones Product Marketing Manager, UK/Northern Europe





About Elsevier

Clinical Solutions

FISEVIER

Elsevier information has served STM professionals for more than130 years, today, Elsevier's content is trusted by more than 30 million scientists, students, and health and information professionals throughout the world.

In the area of Health Sciences, leading Elsevier brands include *The Lancet*, *Braunwald's Heart Disease*, *Gray's Anatomy*, and the *Netter Atlases* among others.

Elsevier produces leading online clinical support tools and products for UK healthcare practitioners, including:

- ClinicalKey
- Journals Consult
- Clinical Pharmacology



About our customers needs



- Clinical information needs are increasing and becoming more diverse
 - Doctors must manage decreasing time for seeing patients
 - patient care, sharing information, patient education and staying current.
 - EHR integration continues to be a high priority – "Paperless NHS by 2018"
- Increased focus on evidence-based decisionmaking
- The challenge for health care librarians is to demonstrate that the services they provide actively support clinical care.





CLINICAL KEY

Managing Clinical Information Overload

In the 1990s, more than two

million articles were published annually in more than 20,000 biomedical

journals,

PubMed

PubMed comprises more than 21 million citations for biomedical literature



Helping doctors make better decisions



internet

BMJ 2002; 324 doi: 10.1136/bmj.324.7337.557 (Published 9 March 2002) **Cite this as:** *BMJ* 2002;324:557

Patient-Care Questions that Physicians Are Unable to Answer



EISEVIER

Definition of Point of Care

 Clinical point of care is when clinicians deliver healthcare products and services to patients at the time of care

Information at the Point of Care: Answering Clinical Questions. Ebell, Mark. "American Board of Family Practice". Michigan State University, 1999, 12(3), 225-235

 "Content is usually summary format designed to deliver pre-digested, rapidly accessible, comprehensive, periodically updated, evidencebased information to clinicians"

Banzi, A Review of Online Evidence-based Practice Point-of-Care Information Summary Providers J Med Internet Res. 2010 Sep 09;12(3) p. e39

 "Clinical librarians seek to provide quality assured information to health professionals at the point of **need**, to support clinical decision making"

Peter Hill, REPORT OF A NATIONAL REVIEW OF NHS HEALTH LIBRARY SERVICES IN ENGLAND: From knowledge to health in the 21st Century, 2008



FI SEV

Clinical Solutions

A clinicians workflow in practice



How can ClinicalKey support at the point of need

ClinicalKey helps users **quickly find** exceptionally **relevant answers** and then, within the same interface, go directly to deep information within a **comprehensive database** containing **the full breadth and depth of information** for which they typically need to access more than one resource.



Clinical Solutions



Smarter Search. Faster Answers



Let's see how





www.clinicalkey.com



ClinicalKey - Smarter Search, Faster Ans +		
← ▲ https://www.clinicalkey.com ☆ マ C*	6 S ▼ Google	₽ ♣ ⋒
Journals Books Practice Guidelines Patient Education Drugs Multimedia CME	Ay ClinicalKey 😨 💽 Breda Corish Logo	ut
CLINICAL KEY Resource Center to learn more.	Search	



Image: ClinicalKey - Smarter Search, Faster Ans +		
A https://www.clinicalkey.com	😭 🔻 🤁 🛛 🔀 🕶 Google	₽ ♣ ♠
Journals Books Practice Guidelines Patient Education Drugs Multimedia CME	My ClinicalKey 💿 💽 Breda Corish	Logout

CLINICAL KEY ELSEVIER

<u>Speed to Answer:</u> Find key journals, books, authors

Smarter search. Faster answers.

А	crohn		Sea	irch
	Suggestions	Related	Books and Journals	Authors
	Crohn's disease	Colonoscopy	Journal of Crohn's and Colitis	Crohn, B
	Crohn's Disease of Large Bowel	Colectomy	Journal of Crohn's and Colitis Supplements	Crohn, E
	Crohn's Disease of Small Bowel	History and physical examination	I	Crohn, D
	Regional enteritis NOS	Proctocolectomy		Crohn, H
	Crohn's disease Risk Factors	Barium enema		Crohn, N
	Crohn's disease in remission	Proctosigmoidoscopy		Crohn, O
	Perianal Crohn's disease	Lifestyle modification		Crohns, C
	Crohn's disease of the ileum	Fiberoptic colonoscopy with biopsy		Crohn, R.
	Gastrointestinal Crohn's disease	Azulfidine EN-tabs		Crohn, Kara
	Crohn"s disease of terminal ileum	POMP protocol		CROHN, B B

<u>Speed to Answer:</u> Smart Content = taxonomypowered content







		<u>FirstConsult</u> Synoptic overviews
calKey - Smarter Search, Faster Ans		
https://www.clinicalkey.com//#!/	earchCtrl/doSearchResults/Crohn's disease///{"type":"Concept"}	8 - Google P
Journals Books Practice Guid	lines Patient Education Drugs Multimedia CME My C	ClinicalKey 🔄 💽 Bred Corish Logout
CLINICAL KEY ELSEV	IER Crohn's disease Search	point-of-care content. Vitals
Saved Searches (10)	Date Releva	ance Reading List (11) + Presentation (4) +
*	Page 1 of 2406 > I C Displaying results 1 to 10 of 24051 Show 10	Item >>
Study Type	Key Results for Crohn's disease	Outline
Date 🔬		Summary
Specialty 🔬	Crohn's disease [First Consult]	Description
Content Type	Bhupinder Anand, MD, Linda Lee, MD, Russell Jones, MD, MPH Revised: 10 Sep 2010	Synonyms Urgent action
All	Crohn's disease is characterized by inflammation and ulceration of the gastrointestinal tract; inflammation may involve the	Key points
🔲 🗾 Journals (7222)	full thickness of the bowel in a patchy, noncontinuous distribution. Any portion of the gastrointestinal tract, from the mo	Background
B Books (1997)	Vedolizumab as induction and maintenance therapy for Crohn's disease. [MEDLINE]	Cardinal features
Fc First Consult (58) Vitals (13)	Sandborn, William J,Feagan, Brian G,Rutgeerts, Paul,Hanauer, Stephen,Colombel, Jean-Frédéric,Sands, Bruce E,Lukas, Milan,Fedorak,	Causes
G Guidelines (35)	Richard N,Lee, Scott,Bressler, Brian,Fox, Irving,Rosario, Maria,Sankoh, Serap,Xu, Jing,Stephens, Kristin,Milch, Catherine,Parikh, Asit,GEMINI 2 Study Group	Epidemiology
MEDLINE (11436)	N. Engl. J. Med., 2013-08-22, The efficacy of vedolizumab, an alpha4beta7 integrin antibody, in Crohn's disease is unknown. In an integrated study with	Codes
🔲 🗖 Drug Monographs (19)	separate induction and maintenance trials, we assessed intravenous vedolizumab therapy (300 mg) in adults with active	Diagnosis
Clinical Trials (486)	Crohn's	- Clinical presentation
Videos (13)		Associated disorders
Images (2727) Patient Education (50)	G Crohn's disease: management in adults, children and young people. [Guideline] National Clinical Guideline Centre - National Government Agency [Non-U.S.] 2012-10-01	Differential diagnosis
Patient Education (50) Procedures Consult (8)		Workup
	Ustekinumab induction and maintenance therapy in refractory Crohn's disease. [MEDLINE]	Clinical pearls
	Sandborn, William J,Gasink, Christopher,Gao, Long-Long,Blank, Marion A,Johanns, Jewel,Guzzo, Cynthia,Sands, Bruce E,Hanauer, Stephen B,Targan, Stephan,Rutgeerts, Paul,Ghosh, Subrata,de Villiers, Willem J S,Panaccione, Remo,Greenberg, Gordon,Schreiber,	Consider consult
Subscribed Content ?	Stefan,Lichtiger, Simon,Feagan, Brian G,CERTIFI Study Group N. Engl. J. Med., 2012-10-19.	Treatment
1919) 	In potients with Crichele diseases the efficiency of untelling men of human menoclenel entitled user interlaukin 40 and ; and Conditions Privacy Policy Registered User Agreement Help	Goals Copyn ht ©2014 Elsevier, Inc. All rights reserved.



icalKey - Smarter Search, Faster Ans 🕂			
https://www. clinicalkey.com //#!/Conte	ntPlayerCtrl/doPlayContent/21-s2.0-1014784/{"sectionId":"122843"}	☆ マ C B - Google	۹ م
Journals Books Practice Guidelines	Patient Education Drugs Multimedia CME	My ClinicalKey 💽 💌 Bre	da Corish Logout
CLINICAL	Crohn's disease Search	Featuring tr point-of-car	rusted, surgical re content.
Saved Searches (10)	Back to Search Results 🚔 🔀 CHE	Reading List (11)	+ Presentation (4)
Expand All Collapse All Go to Top Summary Description Urgent action Key points Background Cardinal features Causes Contributory or predisposing Epidemiology Incidence and prevalence Demographics Codes ICD-9 code Diagnosis Clinical presentation Symptoms Signs Associated disorders Ulcerative colitis 	Differential diagnosis Crohn's disease can mimic almost any gastrointestinal condition. Ulcerative colitis Bacterial/amebic gastroenteritis Yersinia enterocolitica enteritis Clostridium difficile infection Tuberculosis Behçet's syndrome Wegener's granulomatosis Churg-Strauss syndrome Intestinal lymphoma Acute ischemic colitis Diverticulitis with abscess formation Viral gastroenteritis Radiation colitis Vorkup Diagnostic decision The diagnosis of Crohn's disease rests on the clinical presentation and histologic evidence granulomas of the gastrointestinal mucosa. In patients with disease confined exclusively to be readily accessible, and, therefore, the diagnosis is based on the clinical presentation and presentatio	to the small bowel, tissue may not	>>















alKey - Smarter Search, Faster Ans	+		
https://www.clinicalkey.com//#!/C	ontentPlayerCtrl/doPlayContent/3-s2.0-B9781416061892001116/{"sectionId":"hl0001655"} ☆ ⊄	<mark>8</mark> ▼ Google	<u>م</u>
Journals Books Practice Guide	lines Patient Education Drugs Multimedia CME My Cl	linicalKey 😨 💽 Breda Corish	Logout
CLINICAL KEY ELSEV	IER Crohn's disease All Content Search	ClinicalKey Vitals (Be is now available!	ata) vitals
Saved Searches (10)	Back to Search Results 🖶 🔀 CHE TOC	Reading List (11) 🕂 Prese	entation (4)
	and pancreatitis, 'or granulomatous pancreatitis, 'or and pancreatic insufficiency 'or also have been reported.	^ Tools	>
CLINICAL FEATURES	DIFFERENTIAL DIAGNOSIS	Author Information	
DISEASE LOCATION	Establishing a diagnosis of Crohn's disease usually is straightforward once it is considered. Nevertheless, a large number of alternative	Editor	
CLINICAL PRESENTATION	diagnoses may be considered during various stages of the evaluation. Reports are legion of other diseases mistakenly diagnosed as	Mark Feldman MD	
	Crohn's disease and of Crohn's disease mistaken for other diseases. Misdiagnoses may be attributed to the protean presentations of		Shair af
DISEASE BEHAVIOR	Crohn's disease, which include considerable variability among patients with distinct anatomic distributions of disease, different degrees of inflammation, and the variable presence of intestinal complications and extraintestinal manifestations.	William O. Tschumy Jr., MD, C Internal Medicine, Director, Inte	
CLASSIFICATION OF	or minamination, and the variable presence or mestimal complications and extraintestinal mannestations.	Medicine Residency Program.	
DISEASE	There are a number of clinical situations in which Crohn's disease should enter the differential diagnosis, including diarrhea or	Director, Research Services, Te	
PATHOPHYSIOLOGY OF	abdominal pain, especially when localized to the right lower quadrant; evidence of intestinal inflammation on radiologic or endoscopic	Presbyterian Hospital Dallas, C	Clinical
COMMON SYMPTOMS	studies; discovery of an intestinal stricture or fistula arising from the intestine; and evidence of inflammation or granulomas on intestinal	Professor of Internal Medicine,	
AND SIGNS	histology. Categories of causation that overlap with Crohn's disease in clinical presentation include functional bowel disorders, primarily	Texas Southwestern Medical S	ichool,
EXTRAINTESTINAL	F irritable bowel syndrome; immune-mediated diseases, particularly other colitides and most importantly UC; medications, especially NSAIDs; vascular disorders, notably ischemic bowel disease and collagen vascular diseases; neoplasia, including carcinoma and	Dallas, Texas	
MANIFESTATIONS	Ivmphoma; infectious diarrheas, intestinal inflammation, or granulomas; and miscellaneous other diseases and syndromes, including	Lawrence S. Friedman MD	
DIFFERENTIAL DIAGNOSIS	diverticular disease. Once the presence of bowel inflammation has been confirmed, the differential diagnosis may focus on presentation		Medical
ESTABLISHING THE	according to the anatomic location of the findings (Table 111-2).	School, Professor of Medicine,	
DIAGNOSIS AND EVALUATING		University School of Medicine,	Chair,
DISEASE ACTIVITY	Table 111-2	Department of Medicine, Newto	
	Differential Diagnosis of Crohn's Disease	Hospital, Assistant Chief of Me	dicine,
DIFFERENTIATING CROHN'S DISEASE FROM	Differential Diagnosis of Ileitis	References (417)	
ULCERATIVE COLITIS		Figures (8)	
MEASURING DISEASE	Backwash ileitis in ulcerative colitis	Related Videos (5)	















Filter by Specialty 42 Medical & Surgical Specialties





calKey - Smarter Search, Faster Ans	<u>Create Presentations</u> Using >2.5 million images	
	entPlayerCtrl/doPlayContent/1-s2.0-S1471490613001191/{"scope":"all", "query":"Crohn's disease"}	☆ ≂ C S - proctocolectomy
Journals Books Practice Guidelin	es Patient Education Drugs Multimedia CME	My ClinicalKey 😨 💌 Breda Corish Logout
CLINICALKEY	R Crohn's disease All Content Search	ClinicalKey Vitals (Beta) vitals
Saved Searches (10)	🖶 🖂 🔁 🚾 TOC	Reading List (12) + Presentation (4)
Table of Contents Top of Article IBD in the era of immunotherapy	J The challenges of stratifying patients for trials in inflammatory bowel disease Paolo Biancheri, Nick Powell, Giovanni Monteleone, Graham Lord, and Thomas T. MacDonald Trends in Immunology, 2013-11-01, Volume 34, Issue 11, Pages 564-571 Copyright © © 2013 Elsevier Ltd	Author Information References (80) Figures (2)
Genetic heterogeneity in IBD: one disease, two diseases, or dozens of diseases Immunological similarities and differences between CD and UC	Immunotherapy with biological agents or small molecules is revolutionising the treatment of chronic inflammatory di however, a significant proportion of patients fail to respond or lose responsiveness. This is particularly evident in infl disease (IBD), a group of chronic, immune-mediated disorders of the gastrointestinal tract. Different responsiveness can be explained by substantial disease heterogeneity, which is being increasingly recognised by genetic and immu The current enthusiasm for stratified medicine suggests that it may become possible to identify clinical, immunologi genetic biomarkers to target immunotherapy to patients more likely to respond. Here, we identify and highlight the op challenges of this strategy in the context of IBD.	lammatory bowel es to treatment in IBD unological studies. pical, biochemical or
Immunological and clinical heterogeneity of different stages in IBD disease course Possible strategies for predicting prognosis in IBD Successes and failures of immunotherapy in IBD Challenging assumptions about anti-TNF-α therapy and	IBD in the era of immunotherapy The therapeutic approach to chronic inflammatory disease is being advanced by the advent of immunotherapy, which agents or small molecules to target specific pathways in the inflammatory response. Although this approach has rac management of patients with immune-mediated disorders [1], a significant proportion of patients do not respond. Do response to the drugs used in immunotherapy emphasise disease heterogeneity, and highlight that stratification of important for the success or the failure of new treatments. Crohn's disease (CD) and ulcerative colitis (UC) are chronic, spontaneously relapsing and remitting disorders of the tract, thought to originate from an abnormal immune response to the luminal flora in genetically predisposed individ develop in the terminal ileum and colon, shows predominantly a mononuclear cell infiltrate with granulomata, the less	Heterogeneity of genes encoding for molecules of the immune system whose mutations are associated with increased risk of inflammatory bowel disease (IBD). Some of these variants are specific for Crohn's disease (CD), few are specific for ulcerative colitis (UC), and the majority, including several T helper (Th)1- and Th17-related genes, are common to both forms UBD. Interestingly some of the Th1 and Th17.



<u>Presentation Maker</u> One-click export to PowerPoint





Heterogeneity of genes encoding for molecules of the immune system whose mutations are associated with increased risk of int ammatory bowel disease (IBD). So of these variants are specific for Crohn's disease (CD), few are specific for ulcerative colitis (UC), and the majority, including several T helper (Th)1- and Th17-rela genes, are common to both forms of IBD. Interestingly, some of the Th1 and Th17 genes that exhibit variability in IBD are also in portant in the phenotype and func of innate lymphoid cells (ILCs), a cell population that is emerging as a possible central player in gut inflammation. Adapted from 13].

The challenges of stratifying patients for trials in inflammatory bowel disease Biancheri, Paolo, Trends in Immunology, Volume 34, Issue 11, 564-571

CLINICAL KEY

Copyright © 2013 Elsevier Ltd

<u>Use & share results offline</u> Print, PDF download, email





<u>CPD & Revalidation</u> Capture personal reflections











Faster Speed to Answer

ClinicalKey's Smart Content improves the relevance and the accuracy of the clinical answers it returns.

Smart Content

ELSEVIER Clinical Solutions



What it means for users...

I use ClinicalKey when I want to look into something in-depth rather than looking in textbooks. Having too much information can be a problem nowadays - ClinicalKey helps sort it so it's easier to digest. It organises the information from journals, textbooks and other sources, which means it's great for preparing lectures and writing articles.

Dr Jasmeet Soar, editor *Resuscitation* and consultant anaesthetist at North Bristol NHS Trust

It is very beneficial for me to be able to access them online anywhere and particularly when I'm travelling. What's more, I want to be able to identify items for reading later. There are a wide variety of textbooks in cardiology available for my specialty and access to the most authoritative in the field, proves invaluable for my educational development.

I want to be able to schedule my learning through various resources, such as textbooks, journals and guidelines, and online tools such as ClinicalKey have collectively supported my educational development as a trainee.

Dr Abdul Hameed, Cardiology Registrar, Health Education (Yorkshire & the Humber)

As a solo librarian, I work alone for much of the time, so need a solution that will help speed up my searching by enabling me to cover many different resources at the same time. I need search technology that is intuitive with an interface that is simple to use. Moreover, I need to be able to track usage so I can report on our return on investment.

We use ClinicalKey which superseded our previous search function. I love the fact that everything is in one place and that it's such a reliable source of medical information.







ELSEVIER Clinical Solutions

What it means for our customers...



"Library services play a part of central importance in education and research as well as in the delivery of clinical care and the management of clinical services" *Muir Gray, 2008*

 Multiple access points for end-users to discover content to support their needs











OpenAthens

eduserv

OpenAthens Authentication Point

Please wait while we transfer you.

Copyright Edusery - Privacy Policy





CLINICAL KEY



Where are we going...

	🕒 Your EHR			 •	00
	arry Jones			Dr. Rebecca Smith	٥
Patient Summary	Message Center Pati	ent Information Request	Patient Education		
	Patient Name: Age: Sex: D0B: Diagnosis:	Larry R. Jones 48 Male 5 / 23 / 1965 Diabetes I Hypertension Anemia	0 0 0		



Link ClinicalKey to any EHR via InfoButton

O Your EHR 000 A Larry Jones Patient Educatio 14 Patient Name: Larry R Jones Age: 48 Sex: Male Clinical Key 8 DOB: 5/23/1965 Journals Books Practice Guidelines Patient Education Drugs Multimedia CME CLINICAL KEY ELSEVIER Hypertension Diagnosis: Diabetes I 6 Search Saved Searches Date Relevance Reading List (1) + + 🔿 🖂 Hypertension Page 1 of 2007 > H C Displaying results 1 to 10 of 20964 Show 10 💌 Q Anemia Study Type Clinical Strutters Kev Results for Hypertension Date Specialty FC Hypertension (First Consult) Pulmonary hypertension [First Consult] Content Type Appendence of sep 2013 Appendence of sep 2013 two or more visits after initial screening. Stage 1 hypertension is defined as a systolic blood pressure of 140 to 159 mm Journals (13676) (i) Infobutton Manager Haara B Books (3170) R First Consult (184) Search results for: Hypertension Hypertension in children (First Consult) Vitals (1) G Guidelines (394) sed: 09 Cot 2013 Updated: 18 Sep 2013 entension in children is defined as blood pressure measurements greater than or equal to the 95th-percentile value for Drug Monographs (105) **Clinical Pharmacology** US Drug Products the patient's height, sex, and age. Pediatric hypertension, primarily essential or primary hypertension, is increasing in pre-Images (841) P Patient Education (8) G ACCF/AHA/AMA-PCPI 2011 Performance Measures for Adults With Coronary Artery Disease and Hypertension (Journal) n Heart Association, and American Medical Association 2011-09-02 Indications - Results (6 shown of 6 total) 1. hypertension B Hypertension (Book)
 Print Classed Analysis (Bit GBL 4, 0: 2014
 Theperference), Agosthem for identifying patients for evaluation of secondary causes of hypertension. ACE, Arguidensinhypertension, ACE, Arguidensin-2. ocular hypertension two Skills gerioperative hypertension 4. portal hypertension 5. postoperative hypertension Your EHR dine Plus 6. pulmonary hypertension o Clinic Systemic Hypertension (Book) Misson Textbool of Prediators-- Nordesem Editor, Chapter 439, 1035-1647 e1, 0 2011 Management algorithm. Bill, Operating Misson 2016 Pressure, Nood pressure, O, every, PC, prescription, † diet modification and physical activity, 1 especially if younger, very high Blood Pressure, little or no family history, diabetic, or Ţ Contraindications / Precautions - Results (2 show 1. hypertension 2. pulmonary hypertension B Hypertensive Disorders in Pregnancy (Book)
 Trateout Cohor Cares - Son Stim, 19, 191-191, e 2011
 United States Food and Durg Administration. Calegosies of Patal Drug Toxicities United States Food and Drug Administration. Arithypertensive Drugs Commonly Used in Pregnancy Causes of
 Administration, U.S. Food and Drug Administration. Arithypertensive Drugs Commonly Used in Pregnancy Causes of Adverse Reactions - Results (4 shown of 4 total) Ţ Hypertension in Pregnancy Pre 1. hypertension 2. ocular hypertension ET Your Solution 3. pulmonary hypertension 4. putmonary hypertension of the newborn Discharge Instructions - Results (15 shown of 16 total) 1. Arterial Hypertension 2. Early Elective Birth 3. Form - Blood Pressure I Glaucoma
 Glaucoma Surgery, Care After 6. Glaucoma, Easy-to-Read



ELSEVIER

Clinical Solutions

To conclude



- Accessing ClinicalKey at the point of need to support existing point of care workflows
- Content & search enables clinician efficiency and more time with the patient at the point of care
- ClinicalKey content can be delivered at the point of care within Electronic Health Record systems



Smarter Search. Faster Answers

ELSEVIER Clinical Solutions

