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WHAT'S HOT AND COOKING IN SCHOLARLY PUBLISHING



Medicine 0.1



Medieval Flowchart

Are you of noble birth?

Yes

Death by Gout

No

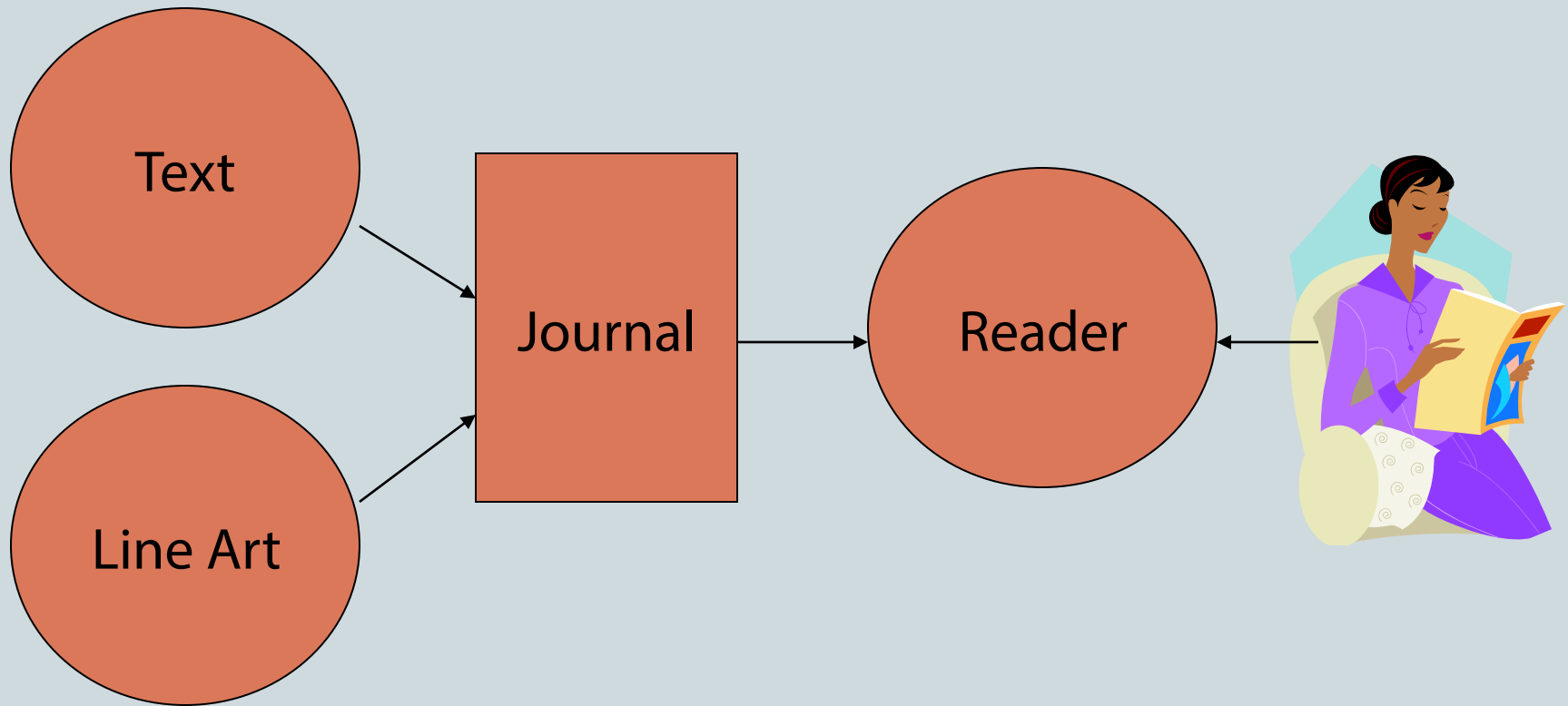
Death by Plague

Medicine 0.1

The fever which accompanied the influenza seldom required general bloodletting; but the difficulty of breathing often required local depletion, by the application of leeches to the chest. I was called, much about the same time, to two ladies who were attacked by the epidemic; they were both of full habits of body, and both in the prime of life. In both cases there was great difficulty of breathing, and high fever. In one of these cases I immediately directed the application of a dozen leeches to the chest, besides giving, internally, James's powder and the extract of hyosciamus, with nitrous and mucilaginous drinks. As the other lady happened to be then very near the period of her accouchement, I hesitated about ordering the leeches, and at first confined the treatment to general remedies. On visiting both patients next morning, I found so great an improvement in the case in which the leeches had been applied, and found that the other patient had passed so restless a night, that I immediately directed the leeches to be applied, which, in this case, also, produced immediate relief; and in both were followed by a speedy and perfect recovery.

December 20, 1837

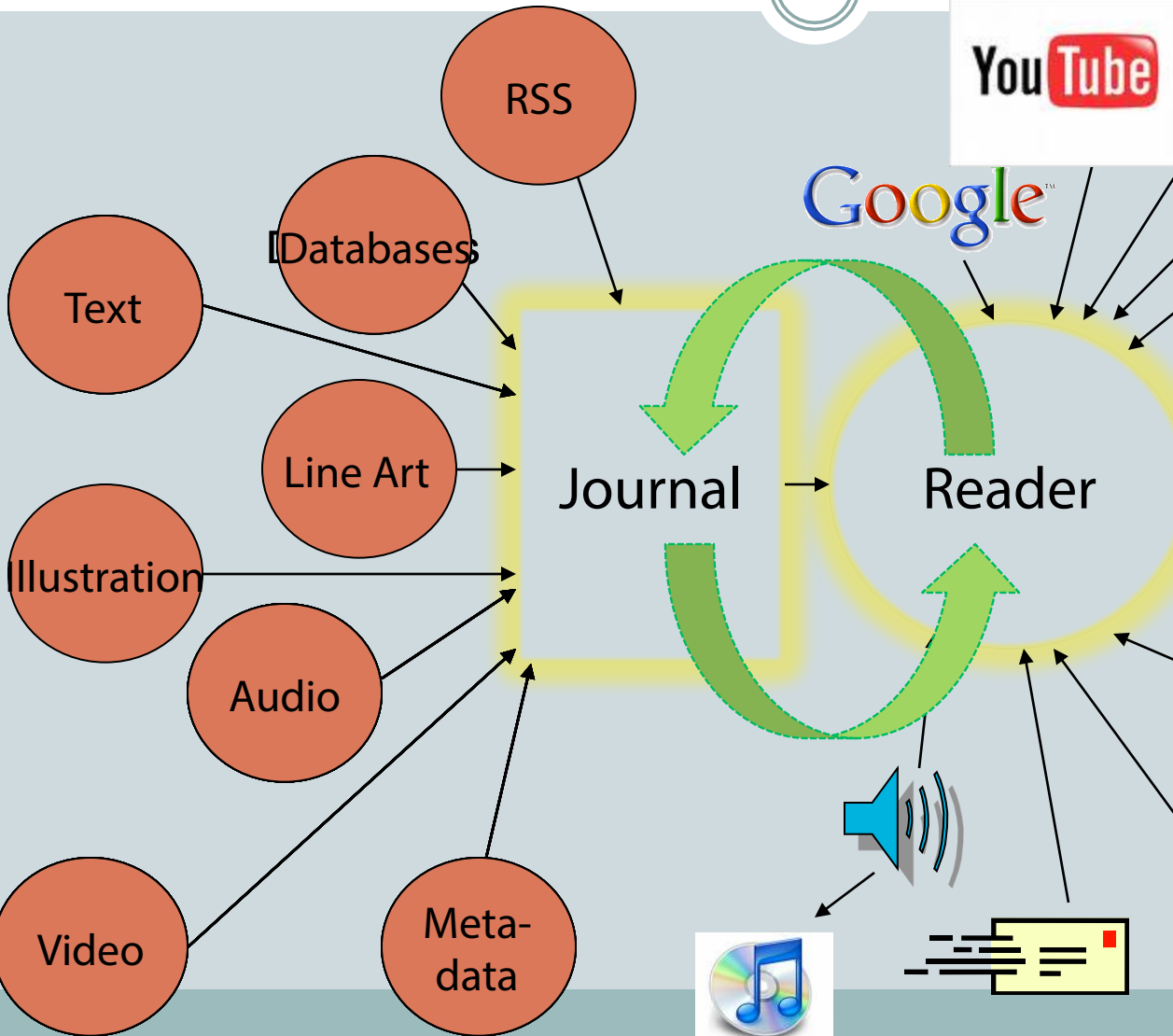
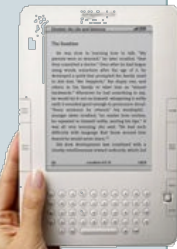
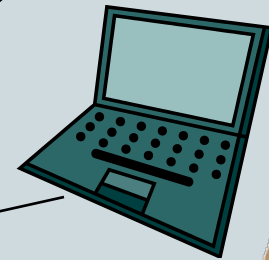
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New Journal World



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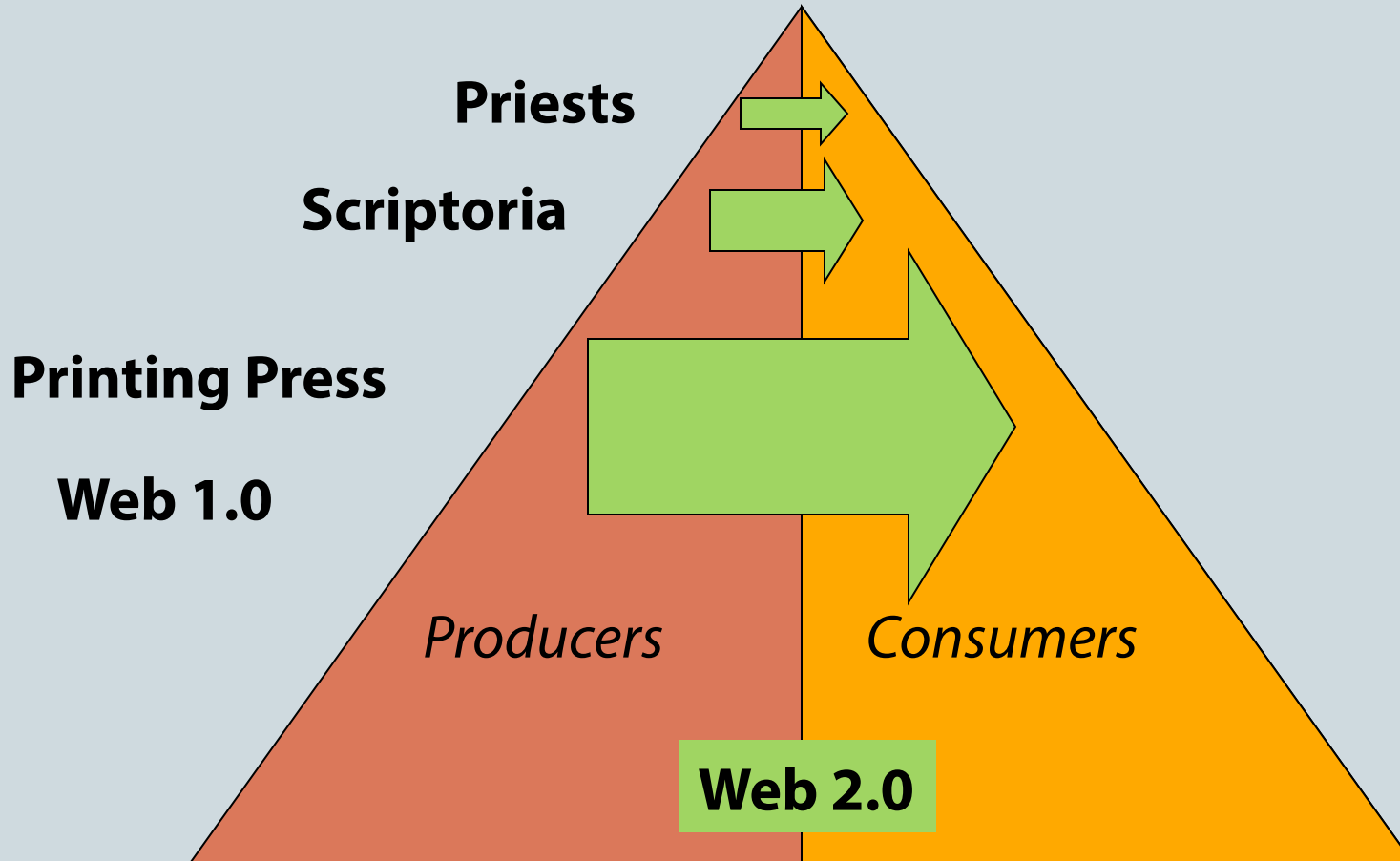
Our Cultural Project



“ . . . to make knowledge
available to nonlinear access
in as many ways as possible.”

O'Donnell, JJ. *Avatars of the Word*. Boston, Harvard University Press, 1999.

The Evolution of Publishing



Intermediation Replaced By . . .



Apomediation

- Mediation by agents not interposed between users and resources
- Agents which “stand by” to guide a consumer to high quality information without a role in the acquisition of the resources
- “Intermediation” was for a scarcity economy
 - Gatekeepers or middlemen

Hierarchy Replaced By . . .



Heterarchy

- A system of organization replete with overlap, multiplicity, mixed ascendancy, and/or divergent-but-coexistent patterns of relation
- Flexible roles and relationships that are largely situational
- Not mutually exclusive to a hierarchy, and can contain or be contained within a hierarchy
- Digital media has made heterarchies very prevalent and useful

Factors Shaping the Future



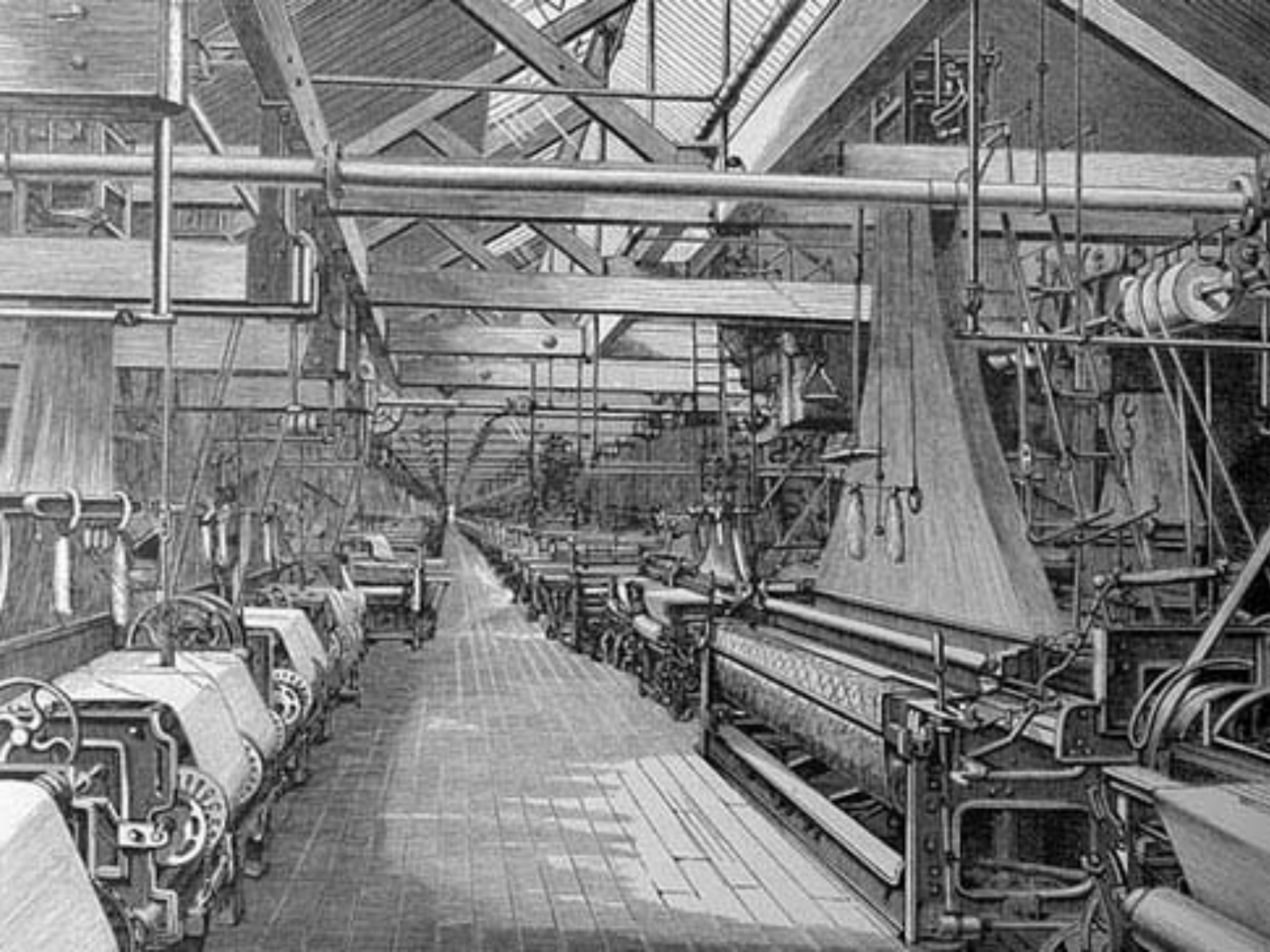
Then	versus	Now
Analog	»	Digital
Delayed	»	Immediate
Tethered	»	Mobile
Isolated	»	Connected
Generic	»	Personal
Consumption	»	Creation
Closed	»	Open
Evolved	»	Engineered

Factors Shaping the Future



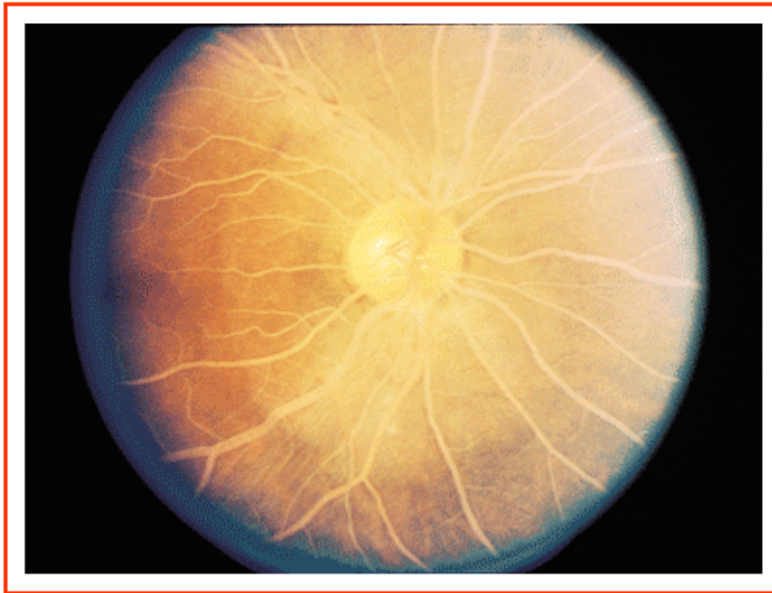
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Interaction 2.0

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Question: What is the diagnosis?

Submit Your Response



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QUESTION:

What is the diagnosis?

- 1. Erythema ab igne
- 2. Onchocerciasis
- 3. Sarcoidosis
- 4. Syphilis
- 5. Tuberculosis

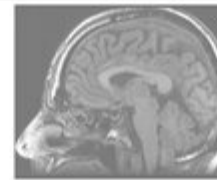
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QUESTION:

What is the diagnosis?

- 1. Erythema ab igne

- 2. Onchocerciasis

- 3. Sarcoidosis

- 4. Syphilis

- 5. Tuberculosis

(17519 total responses)

CHECK ANSWER

How Others Chose

ANSWER:

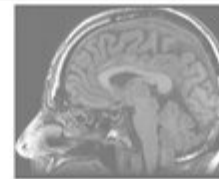
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QUESTION:

What is the diagnosis?

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- 2. Onchocerciasis
- 3. Sarcoidosis
- 4. Syphilis
- 5. Tuberculosis

(17520 total responses)

CHECK ANSWER

How Others Chose

ANSWER:

Correct!

The classic clinical manifestations of onchocerciasis are skin and eye changes. Dermatologic manifestations include acute papular or chronic dermatitis, and depigmentation that manifests classically as spotty areas of hypopigmented skin (leopard skin), as in this patient.

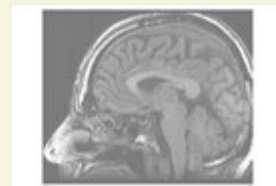
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 - Approx. 1,500 users per week
 - No customer “buzz”
 - Not a popular feature
- **Strong interactive design**
 - Approx. 30,000 users per week
 - Between 2005 and 2009, more than 12 million responses
 - Strong customer “buzz”
 - Third most popular domain-level directory (after index and search)



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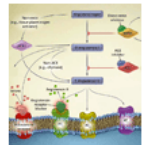
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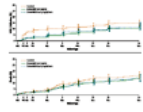
ORIGINAL ARTICLE



Aliskiren Combined with Losartan in Type 2 Diabetes and Nephropathy

In patients with type 2 diabetes and nephropathy, aliskiren was associated with a reduction in the mean urinary albumin-to-creatinine ratio. This direct renin inhibitor may be renoprotective independently of its blood-pressure-lowering effects in this patient population. [CME Exam](#)

ORIGINAL ARTICLE



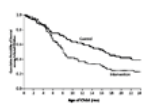
Extended Therapy to Reduce HIV-1 Transmission in Breast Milk

In this trial in Malawi, infants without HIV-1 infection who were born to infected mothers were randomly assigned to receive a single dose of nevirapine plus 1 week of zidovudine (control regimen) or the control regimen plus extended daily therapy with nevirapine or with nevirapine plus zidovudine until the age of 14 weeks. Extended therapy significantly decreased the rate of HIV-1 transmission at 9 months.

ONLINE FIRST June 4, 2008 (DOI: 10.1056/NEJMoa0801941), in Print July 10, 2008

▶ [Related Editorial: Breast-Feeding, Antiretroviral Prophylaxis, and HIV](#)

ORIGINAL ARTICLE



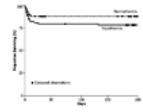
Early, Abrupt Weaning and HIV-free Survival of Children in Zambia

In this trial in Zambia, HIV-infected women were randomly assigned to breast-feeding according to the standard practice or to abrupt weaning at 4 months. There was no significant difference in HIV-free survival between the study groups at 24 months.

ONLINE FIRST June 4, 2008 (DOI: 10.1056/NEJMoa073788), in Print July 10, 2008

▶ [Related Editorial: Breast-Feeding, Antiretroviral Prophylaxis, and HIV](#)

ORIGINAL ARTICLE



A Trial of Hypothermia in Children with Brain Injury

In this randomized trial of hypothermia in children with severe traumatic brain injury, severe disability, a persistent vegetative state, or death occurred in 31% of patients who were treated with hypothermia for 24 hours and in 22% of controls.



More than Pharyngitis

This 19-year-old woman presented with a 10-day history of odynophagia, voice changes, and fever. She had been treated with azithromycin and prednisone for pharyngitis.

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IMAGE CHALLENGE



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Diabetes Treatment — Bridging the Divide

Rother KI

In the simplest terms, **diabetes** mellitus results when pancreatic beta cells are unable to maintain adequate insulin secretion to prevent hyperglycemia. A combination of genetic and environmental factors . . .

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N Engl J Med 356:1499, April 12, 2007 *Perspective*

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Finding New Treatments for Diabetes — How Many, How Fast . . . How Good?

Nathan DM

Two modern-day epidemics, HIV–AIDS and type 2 **diabetes** mellitus, have inspired impassioned calls for more effective interventions. In the 1980s, the rapid spread of HIV, with its associated severe, acute . . .

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Initial Management of Glycemia in Type 2 Diabetes Mellitus

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Long-Term Effect of Diabetes and Its Treatment on Cognitive Function

Background Long-standing concern about the effects of type 1 **diabetes** on cognitive ability has increased with the use of therapies designed to bring glucose levels close to the nondiabetic range and the . . .

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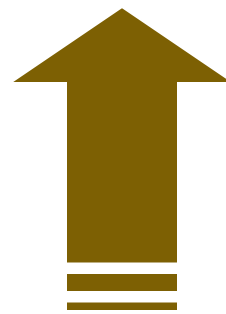
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ORIGINAL ARTICLE

Long-Term Effect of Diabetes and Its Treatment on Cognitive Function

The Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications (DCCT/EDIC) Study Research Group*

ABSTRACT

BACKGROUND

Long-standing concern about the effects of type 1 diabetes on cognitive ability has increased with the use of therapies designed to bring glucose levels close to the nondiabetic range and the attendant increased risk of severe hypoglycemia.

METHODS

A total of 1144 patients with type 1 diabetes enrolled in the Diabetes Control and Complications Trial (DCCT) and its follow-up Epidemiology of Diabetes Interventions and Complications (EDIC) study were examined on entry to the DCCT (at mean age 27 years) and a mean of 23 years later with the same comprehensive battery of cognitive tests. Glycated hemoglobin levels were measured and the frequency of severe hypoglycemic events leading to coma or seizures was recorded during the follow-up period. We assessed the effects of original DCCT treatment-group assignment, mean glycated hemoglobin values, and frequency of hypoglycemic events on measures of cognitive ability, with adjustment for age at baseline, sex, years of education, length of follow-up, visual acuity, self-reported sensory loss due to peripheral neuropathy,

The members of the writing committee — Alan M. Jacobson, M.D., and Gail Musen, Ph.D., Joslin Diabetes Center and Harvard Medical School, Boston; Christopher M. Ryan, Ph.D., and Nancy Silvers, R.N., University of Pittsburgh School of Medicine, Pittsburgh; Patricia Cleary, M.S., and Barbara Waberski, M.S., George Washington University, Rockville, MD; Amanda Burwood, B.S., and Katie Weinger, Ed.D., Joslin Diabetes Center, Boston; Meg Bayless, R.N., University of Iowa College of Medicine, Iowa City; William Dahms, M.D. (deceased), Case Western Reserve University, Cleveland; and Judith Harth, R.N., University of Western Ontario Schulich School of Medicine, London, ON, Canada — and the DCCT/EDIC Study Research Group assume responsibility for the overall con-

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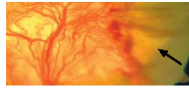
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Proliferative Diabetic Retinopathy
A 56-year-old man with diabetes presented with a several-month history of decreased vision in the left eye. For more, go to <http://content.nejm.org/cgi/content/full/360/9/912>.

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VOLUME 1, ISSUE 2

RESULTS IN Diabetes

The Most-Viewed Articles about Diabetes from January to March 2009

ORIGINAL ARTICLE

Glucose Control and Vascular Complications in Type 2 Diabetes

William Duckworth, M.D., and others

BACKGROUND

The effects of intensive glucose control on cardiovascular events in patients with long-standing type 2 diabetes mellitus remain uncertain.

METHODS

We randomly assigned 1791 military veterans (mean age, 60.4 years) who had a suboptimal response to therapy for type 2 diabetes to receive either intensive or standard glucose control. Other cardiovascular risk factors were treated uniformly. The mean number of years since the diagnosis of diabetes was 11.5, and 40% of the patients had already had a cardiovascular event. The goal in the intensive-therapy group was an absolute reduction of 1.5 percentage points in the

continued on page 2

ORIGINAL ARTICLE

Clopidogrel plus Aspirin in Atrial Fibrillation

The ACTIVE Investigators

BACKGROUND

Vitamin K antagonists reduce the risk of stroke in patients with atrial fibrillation but are considered unsuitable in many patients, who usually receive aspirin instead. We investigated the hypothesis that the addition of clopidogrel to aspirin would reduce the risk of vascular events in patients with atrial fibrillation.

METHODS

A total of 7554 patients with atrial fibrillation who had an increased risk of stroke and for whom vitamin K-antagonist therapy was unsuitable were randomly assigned to receive clopidogrel (75 mg) or placebo, once daily, in addition to aspirin. The primary outcome was the composite of stroke, myocardial infarction, non-central nervous system systemic embolism, or death from vascular causes.

RESULTS

At a median of 3.6 years of follow-up, major vascular events had occurred in 832 patients

continued on page 2

ORIGINAL ARTICLE

Intensive vs. Conventional Glucose Control in Critically Ill Patients

The NICE-SUGAR Study Investigators

BACKGROUND

The optimal target range for blood glucose in critically ill patients remains unclear.

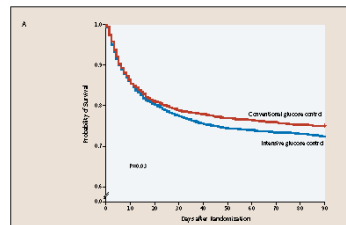
METHODS

Within 24 hours after admission to an intensive care unit (ICU), adults who were expected to require treatment in the ICU on 3 or more consecutive days were randomly assigned to undergo either intensive glucose control, with a target blood glucose range of 81 to 108 mg per deciliter (4.5 to 6.0 mmol per liter), or conventional glucose control, with a target of 180 mg or less per deciliter (10.0 mmol or less per liter). We defined the primary end point as death from any cause within 90 days after randomization.

RESULTS

Of the 6104 patients who underwent randomization, 3054 were assigned to undergo intensive control and 3050 to undergo conventional control; data with regard to the primary outcome at day 90 were available for 3010 and 3012 patients, respectively. The two groups had similar characteristics at baseline. A total of 829

continued on page 6



Subgroup	Intensive Control (n=3010)	Conventional Control (n=3012)	Odds Ratio for Death (95% CI)	P Value for Heterogeneity
Operative selection	175/211	203/212	1.15 (0.81-1.64)	0.19
Yes	352/211	313/212	1.07 (0.93-1.23)	
No	139/210	169/210	1.32 (0.95-1.83)	0.09
Severe sepsis	436/214	363/216	1.10 (0.94-1.27)	0.52
Yes	245/213	172/215	1.33 (0.94-1.86)	
No	191/211	191/211	1.12 (0.84-1.50)	
Trans	4/203	57/215	0.17 (0.06-0.33)	0.01
Yes	75/207	114/214	1.17 (0.94-1.47)	
No	186/206	163/201	1.37 (0.94-1.97)	0.08
NIHSS score	116/202	117/214	1.14 (0.95-1.37)	0.21
≥5	145/203	117/216	1.11 (0.95-1.29)	
<5	139/201	146/201	1.08 (0.84-1.39)	0.04
APACHE II	136/210	140/211	1.08 (0.84-1.39)	0.04
Yes	116/204	112/214	1.16 (0.94-1.43)	
No	120/206	128/207	1.14 (0.95-1.37)	0.02

Probability of Survival and Odds Ratios for Death, According to Treatment Group.

Panel A shows Kaplan-Meier estimates for the probability of survival, which at 90 days was greater in the conventional control group than in the intensive control group (hazard ratio, 1.11; 95% confidence interval, 1.01 to 1.23; P=0.03). Panel B shows the odds ratio (and 95% confidence interval) for death from any cause in the intensive-control group as compared with the conventional-control group, among all patients and in six predefined pairs of subgroups. The size of the symbols indicates the relative numbers of deaths. The Acute Physiology and Chronic Health Evaluation II (APACHE II) score can range from 0 to 71, with higher scores indicating more severe organ dysfunction.

INSIDE

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CURRENT ISSUE: June 5, 2008

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ORIGINAL ARTICLE

Aliskiren Combined with Losartan in Type 2 Diabetes and Nephropathy

In patients with type 2 diabetes and nephropathy, aliskiren was associated with a reduction in the mean urinary albumin-to-creatinine ratio. This direct renin inhibitor may be renoprotective independently of its blood-pressure-lowering effects in this patient population. [CME Exam](#)

ORIGINAL ARTICLE

Extended Therapy to Reduce HIV-1 Transmission in Breast Milk

In this trial in Malawi, infants without HIV-1 infection who were born to infected mothers were randomly assigned to receive a single dose of nevirapine plus 1 week of zidovudine (control regimen) or the control regimen plus extended daily therapy with nevirapine or with nevirapine plus zidovudine until the age of 14 weeks. Extended therapy significantly decreased the rate of HIV-1 transmission at 9 months.

ONLINE FIRST June 4, 2008 (DOI: 10.1056/NEJMoa0801941), in Print July 10, 2008

▶ [Related Editorial: Breast-Feeding, Antiretroviral Prophylaxis, and HIV](#)

ORIGINAL ARTICLE

Early, Abrupt Weaning and HIV-free Survival of Children in Zambia

In this trial in Zambia, HIV-infected women were randomly assigned to breast-feeding according to the standard practice or to abrupt weaning at 4 months. There was no significant difference in HIV-free survival between the study groups at 24 months.

ONLINE FIRST June 4, 2008 (DOI: 10.1056/NEJMoa073788), in Print July 10, 2008


▶ [Related Editorial: Breast-Feeding, Antiretroviral Prophylaxis, and HIV](#)

ORIGINAL ARTICLE

A Trial of Hypothermia in Children with Brain Injury

In this randomized trial of hypothermia in children with severe traumatic brain injury, severe disability, a persistent vegetative state, or death occurred in 31% of patients who were treated with hypothermia for 24 hours and in 22% of controls.

IMAGE OF THE WEEK

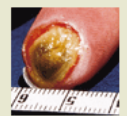


More than Pharyngitis

This 19-year-old woman presented with a 10-day history of odynophagia, voice changes, and fever. She had been treated with azithromycin and prednisone for pharyngitis.

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IMAGE CHALLENGE



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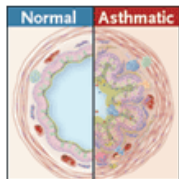
MOST POPULAR

Most Viewed

1. Hepatopulmonary Syndrome — A Liver-Induced Lung Vascular Disorder
2. Severe Constipation
3. Precocious Puberty



CLINICAL DECISIONS NEW INTERACTIVE FEATURE



This issue of the *Journal* includes reports of two major clinical trials of different treatment strategies that may affect future clinical decisions made by physicians and patients:

- [Randomized Comparison of Strategies for Reducing Treatment in Mild Persistent Asthma](#)
- [Rescue Use of Beclomethasone and Albuterol in a Single Inhaler for Mild Asthma](#)

This interactive feature allows readers to decide on the diagnosis or management of a clinical case. A case vignette is followed by specific clinical options.

Voting and Commenting Closed June 14, 2007

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Treatment of Mild Persistent Asthma

Case Vignette

You are consulted by a 30-year-old white woman, who holds an administrative position in an office and has a lifelong history of asthma, about the treatment of her condition. In childhood, the patient visited her local hospital for treatment of acute asthma, but she was never admitted overnight and was discharged from the emergency department after a few "breathing treatments." Her asthma became quiescent in her late teens and remained so until 5 years ago, when after the birth of her first child, she began to note shortness of breath when recovering from exercise. At that time, she was awakened from sleep about once a month because of her asthma, but she did not need to seek emergency care for her condition. Her physician prescribed inhaled beclomethasone, two puffs (80 μ g per puff) twice a day, and gave her an albuterol inhaler to use as an as-needed rescue treatment.

With this treatment, the patient's asthma has been stable for the past 4 years. Her current spirometric data are as follows: forced expiratory volume in 1 second (FEV₁), 3.16 liters (82% of the predicted value); forced vital capacity (FVC), 3.85 liters (82% of the predicted value); and the ratio of FEV₁ to FVC, 0.82. The fraction of nitric oxide in the exhaled air is 10 ppb. Skin testing has revealed substantial responses only to ragweed. She uses her albuterol inhaler two or three times a week, usually as premedication before exercise. She has no nocturnal symptoms. She has not had any unscheduled medical visits for her asthma.

The patient wonders whether she should receive less asthma treatment. She is willing to tolerate some symptoms if the treatment will be associated with fewer long-term side effects.

Treatment Options

Treatment Options

What kind of treatment will most closely meet the patient's needs? Three options are outlined and each is defended in a short essay by an expert in asthma therapy; read the essays and then cast your vote.

Treatment Option 1

Treatment Option 2

Treatment Option 3

As-Needed Use of Inhaled Beclomethasone and Albuterol

Monica Kraft, M.D. From the Pulmonary Division, Duke Medical Center, Durham, NC.

The case vignette describes a young woman whose asthma is well controlled during twice-daily treatment with inhaled corticosteroids. We measure asthma control on the basis of the need for inhaled β_2 -agonists to control asthma symptoms, the presence of daytime and nocturnal symptoms, the frequency of exacerbations of asthma, tolerance of exercise, and lung function. The patient has done well on all these measures and is using albuterol essentially only on a preventive basis before exercise; she also has normal lung function and has not had an exacerbation in 4 years. Therefore, the "stepping down" of therapy is an appropriate management strategy and will also address the patient's concerns about long-term side effects of corticosteroids.³

Symptom-based therapy with inhaled corticosteroids and β_2 -agonists is a relatively new approach, but it is supported in the literature.⁴ It has distinct advantages for patients with mild persistent asthma that is well controlled, such as the patient in the case vignette. This group is especially prone to noncompliance, most likely owing to the intermittent nature of their symptoms.⁵ As shown by Papi et al. in this issue of the *Journal*, the as-needed use of beclomethasone and albuterol (also known as salbutamol outside the United States) in a single inhaler significantly reduced the overall use of corticosteroids, yet maintained the control of asthma. The dose of beclomethasone per puff (250 μg) in that study was considerably higher than what the patient in the vignette uses (80 μg), so the degree to which the use of beclomethasone could ultimately be reduced in the patient with an as-needed approach is not known.

However, a recent study by the Asthma Clinical Research Network of the National Heart, Lung, and Blood Institute⁴ showed that, in patients with mild persistent asthma, the use of as-needed inhaled corticosteroids according to a symptom-based action plan did not result in significant differences in the morning peak expiratory flow rate as compared with either twice-daily budesonide or twice-daily zafirlukast. In that study, the daily use of budesonide did improve the prebronchodilator FEV₁ (but not the postbronchodilator FEV₁) and also increased the number of symptom-free days, as compared with as-needed therapy.⁴ The quality of life of patients receiving each treatment regimen was similar. Since the patient in the vignette is concerned about the long-term effects of inhaled corticosteroids and is willing to tolerate some increase in symptoms, an as-needed regimen has the greatest potential to decrease her exposure to corticosteroids while tailoring treatment directly to her symptoms.

The as-needed inhaled beclomethasone and albuterol regimen is the most appropriate choice for the patient, since current guidelines indicate that long-acting beta-agonists are not indicated for the treatment of mild persistent asthma.⁶ A leukotriene modifier is an option, but it would require daily use and, at this time, it is second-line therapy to an inhaled corticosteroid for the treatment of mild persistent asthma.⁶ The long-term benefits of as-needed low-dose inhaled corticosteroids are not known, since clinical trials have yet to be performed. Although the use of inhaled corticosteroids on an intermittent basis has not been specifically approved by the FDA, it makes sense for step-down therapy to be administered as a means of reducing exposure to corticosteroids. In a motivated patient who understands the risks, step-down therapy could prove useful to optimize the control of asthma symptoms. In an era in which we desire to personalize medicine, an as-needed regimen of antiinflammatory medication for well-controlled mild persistent asthma could achieve this goal in the patient, reducing exposure to corticosteroids while maintaining control of her asthma.

Dr. Kraft reports serving as a consultant to Teva Specialty Pharmaceuticals, GlaxoSmithKline, and Merck; receiving lecture fees or royalties for educational materials from Boehringer Ingelheim, GlaxoSmithKline, Merck, Elsevier, and Schering-Plough; and receiving grant support from Astmatx, Genentech, Altana, and GlaxoSmithKline. No other potential conflict of interest relevant to this article was reported.

Cast Your Vote

Given your knowledge of the condition and the points made by the experts, which treatment approach would you choose? Base your opinion on the published literature (including the articles by the American Lung Association Asthma Clinical Research Centers¹ and Papi et al.² in this issue of the *Journal*), your past experience, recent guidelines, and other sources of information, as appropriate. Indicate your choice by using the Cast Your Vote button below. You may also submit comments after you vote (maximum of 175 words).

Cast Your Vote

Given your knowledge of the
and other sources of informa

View Comments

All comments are screened
then weekly until Novemb

Treatment Option 1

Appropriate Medical Ma

FEATURED COMMENT

Posted: 11/11/07

Medical management sho
of careful observation for c
risks of intervention.

Mark D. Sugi
Los Angeles, California
Occupation: Student

FEATURED COMMENT

Posted: 11/10/07

I support option A becau
to medical treatment first.

Ramiro Lopez Menchaca
Madrid, Spain
Occupation: Physician

FEATURED COMMENT

Posted: 11/08/07

Any treatment option should aim towards decreasing morbidity (chest pain) or mortality. As we did not initiate effective medical treatment yet and there is no evidence that PCI has mortality benefit over medical treatment, we should start with the medical treatment option. If full medical treatment fails to control patient's chest pain, we would move to revascularization strategy, preferably CABG, later on.

Amr Youssef
Cairo, Egypt
Occupation: Physician

Comment ID: B06B93
Disclosure: None

http://www.nejm.org - Clinical Decisions -- Management of Stable Coronary Disease -- Final Voting Results - Mozilla Firefox

The NEW ENGLAND JOURNAL of MEDICINE

CLINICAL DECISIONS INTERACTIVE

Management of Stable Coronary Disease, *N Engl J Med* 2007; 357:1762-1766

INSTRUCTIONS

World total answers

Zoom

Spain

Total number of votes: 214

- Treatment option 1: 81 votes
Appropriate Medical Management and Close Follow-up for Adherence
- Treatment option 2: 56 votes
Appropriate Medical Management and PCI
- Treatment option 3: 77 votes
Appropriate Medical Management and CABG

Treatment Option	Percentage of Votes
Treatment option 1	37.85%
Treatment option 2	26.17%
Treatment option 3	35.98%

Orientation map

Close ▶

Transferring data from www.nejm.org...

perience, recent guidelines,
5 words).

VOTING RESULTS

as of 11/14/2007

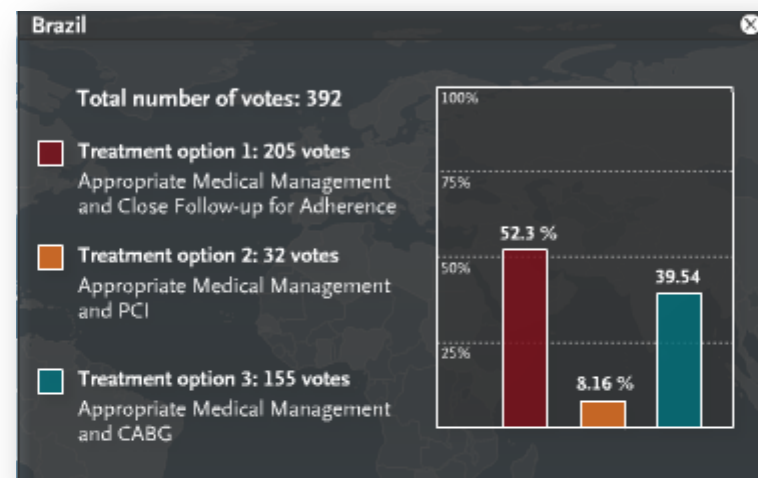
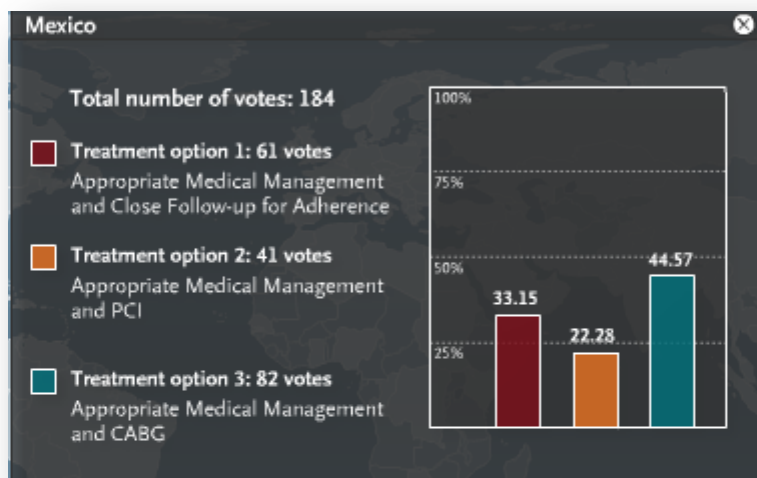
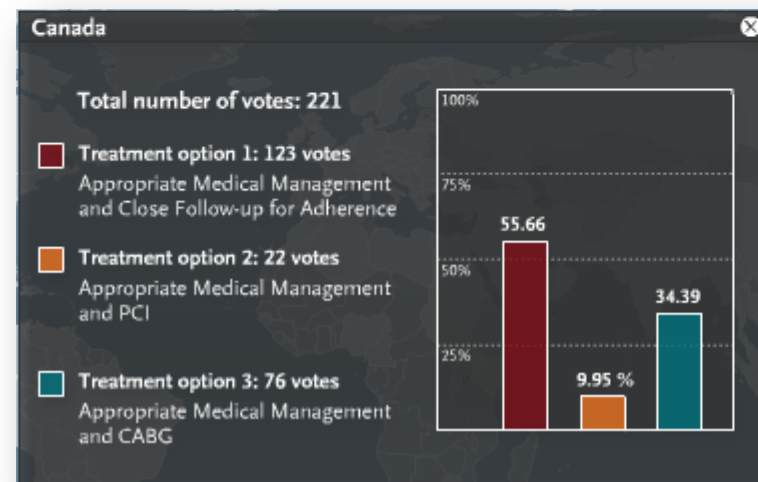
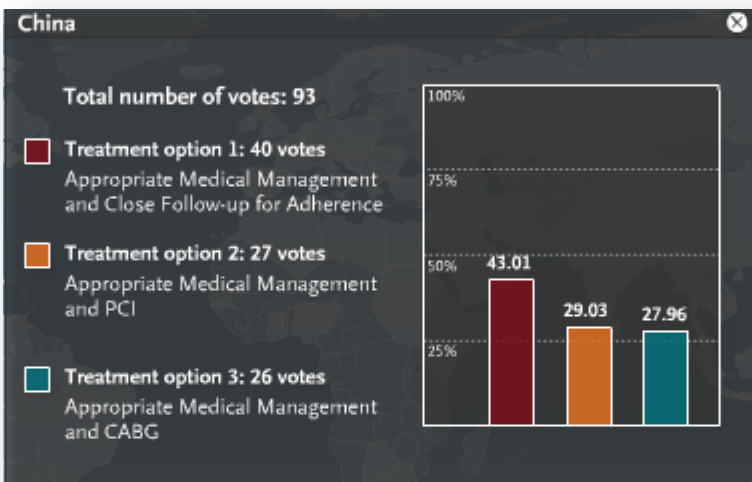
What kind of initial
treatment would you find
most appropriate for this
patient?

Medical Therapy
43%

Medical Therapy plus PCI
17%

Medical Therapy plus CABG
40%

Total votes: 7632



CLINICAL DECISIONS
INTERACTIVE AT WWW.NEJM.ORG

Management of Stable Coronary Disease — Polling Results

Susan Cheng, M.D., and John Jarcho, M.D.

In late October, we presented the case of a patient with stable coronary artery disease in Clinical Decisions,¹ an interactive feature designed to assess how readers would manage a clinical problem for which there may be more than one appropriate treatment. Our patient was a 65-year-old man with hypertension, obesity, and type 2 diabetes who presented with a 2-week history of exertional angina. He underwent an exercise-tolerance test on a treadmill, along with myocardial perfusion imaging, which showed a fixed anterior defect and a reversible anterolateral defect, both of moderate size. His subsequent cardiac catheterization revealed an occluded first diagonal branch, a long lesion with 70% stenosis in the midportion of the left anterior descending coronary artery, a calcified lesion with 80% stenosis in the proximal left circumflex coronary artery, and 50% stenosis of the posterior descending coronary artery. These findings were accompanied by anterior-wall hypokinesia and an ejection fraction of 45% by left ventriculography.

Of the three management options proposed, the most popular — receiving 3282 votes (43.0% of the 7632 votes cast) — was to initiate appropriate medical therapy and follow the patient closely for adherence and efficacy. A close second, with 3066 votes (40.2% of the votes cast), was the option to initiate appropriate medical therapy and to refer the patient for percutaneous coronary intervention (PCI), received 1284 votes (16.8% of the votes cast). The 7632 participants who voted were from 111 distinct countries and regions and indicated that they were physicians (84.9%), students (7.7%), or other health professionals (5.0%). Detailed results are displayed according to country at www.nejm.org. The percentage of participants who selected a given treatment option varied only slightly when responses were

stratified by participants' self-reported locations (Fig. 1).

In addition to votes, we received 446 comments, 95% of which were posted at www.nejm.org (after being reviewed for appropriateness). The majority of comments were in favor of either medical therapy alone or medical therapy plus CABG, reflecting the overall voting trends. Reasons given in favor of a particular management strategy were varied but included some recurrent themes.

The majority of respondents who chose to treat the patient with improved medical therapy alone considered the patient to have stable angina with fair exercise tolerance in the setting of what could be considered to be, in effect, two-vessel coronary artery disease. Most believed that the patient's poorly controlled risk factors warranted a fair trial of aggressive medical therapy and lifestyle modification, which could include cardiac rehabilitation. A number of respondents cited data from the COURAGE trial² and other studies^{3,4} suggesting that revascularization at this time would not offer a mortality benefit and would pose procedure-associated risks. Additional justifications for selecting this treatment option included cost-effectiveness and the opportunity to reassess the need for revascularization later.

Respondents who preferred to escalate medical therapy and simultaneously refer the patient for PCI considered the patient to have coronary artery disease in need of revascularization but not requiring CABG. Many wanted to improve symptoms in the short term, and some pointed out that even stable angina would limit the patient's ability to comply with lifestyle modifications. A number of respondents commented that although aggressive medical therapy might improve overall prognosis, PCI would improve quality of life, and improved quality of life would be of more tangible value to the patient. Opinions differed as to whether PCI should involve the placement of

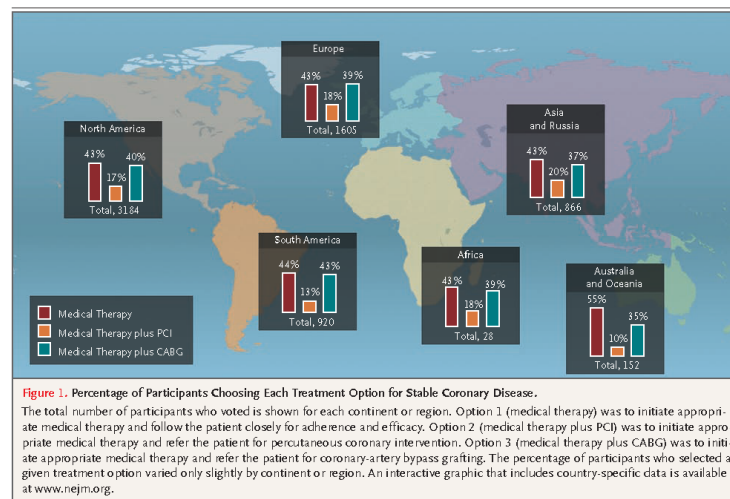


Figure 1. Percentage of Participants Choosing Each Treatment Option for Stable Coronary Disease.

The total number of participants who voted is shown for each continent or region. Option 1 (medical therapy) was to initiate appropriate medical therapy and follow the patient closely for adherence and efficacy. Option 2 (medical therapy plus PCI) was to initiate appropriate medical therapy and refer the patient for percutaneous coronary intervention. Option 3 (medical therapy plus CABG) was to initiate appropriate medical therapy and refer the patient for coronary-artery bypass grafting. The percentage of participants who selected a given treatment option varied only slightly by continent or region. An interactive graphic that includes country-specific data is available at www.nejm.org.

a stent in the lesion of the left anterior descending coronary artery, the lesion of the proximal left circumflex coronary artery, or both. Those who recommended placement of a stent in the lesion of the left anterior descending artery often attributed the reversible anterolateral defect to this lesion, and they also found the depressed ejection fraction with anterior hypokinesia compelling. Those who thought that the lesion of the proximal left circumflex artery was contributing to the reversible defect noted that this artery would be more amenable to placement of a stent than to bypass grafting. Opinions also differed as to whether bare-metal or drug-eluting stents would be better, especially given the higher rate of restenosis in patients with diabetes and the patient's long lesion of the left anterior descending artery, which would require the placement of multiple stents.

Those who opted to escalate medical therapy and to refer the patient for CABG considered the patient's coronary disease to be too severe for either medical therapy alone or PCI. A number of respondents commented that the atherosclerotic

burden amounted to three-vessel coronary disease and therefore warranted a surgical approach, particularly given the patient's diabetes and a depressed ejection fraction. Even many of those who considered the patient to have two-vessel disease concluded that CABG would be the most definitive, durable treatment option. The majority of respondents in favor of CABG cited studies suggesting a substantial survival advantage associated with CABG as compared with the alternatives,⁴⁻⁶ along with longer-term symptom relief. Some expressed concern that medical therapy alone would not be enough to have an effect on diffuse, calcific coronary disease. Others noted that bypassing the long lesion of the left anterior descending coronary artery by using an internal thoracic artery would be preferable to PCI with multiple stents, each adding to the risk of restenosis, especially given the patient's diabetes. A few respondents suggested that CABG was the best treatment for a patient with limited adherence to medical therapy.

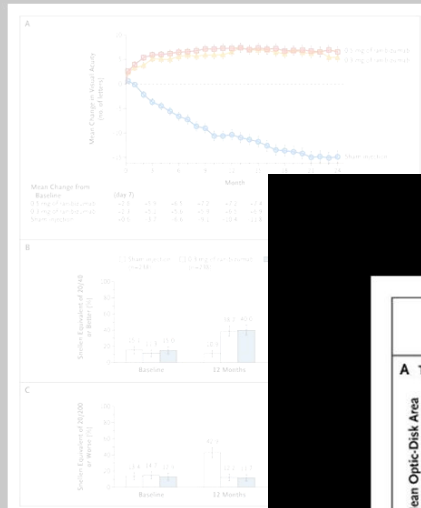
This is clearly a controversial area; more data on symptomatic but stable coronary artery disease

Original Article

Ranibizumab for Neovascular Age-Related Macular Degeneration

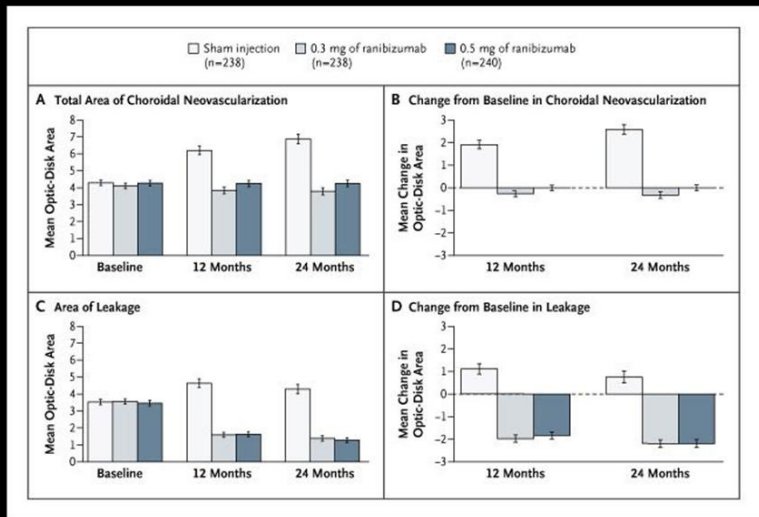
Philip J. Rosenfeld, M.D., Ph.D., David M. Brown, M.D., Jeffrey S. Heier, M.D., David S. Boyer, M.D., Peter K. Kaiser, M.D., Carol Y. Chung, Ph.D., Robert Y. Kim, M.D., for the MARINA Study Group

Mean Changes from Baseline in Visual Acuity and Snellen Equivalents at 12 and 24 Months



Rosenfeld PJ et al. N Engl J Med 2006

Mean (\pm SE) Changes in Choroidal Neovascularization and Leakage



Rosenfeld PJ et al. N Engl J Med 2006;355:1419-1431

The Numbers



- In less than 2 years, more than 450,000 slide sets were downloaded
- Each slide set was used 3-5 times
- Each slide set was used in front of 10-15 people
- Total viewings (conservative) = **~18,000,000 in 20 months**
- *Number of print journals distributed during the same time = ~17,600,000*



FROM THE PUBLISHERS OF THE NEW ENGLAND JOURNAL OF MEDICINE

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The Public's Response to the 2009 H1N1 Influenza Pandemic NEJM

May 19, 2010 • COMMENTS (0)

PERSPECTIVE

The Public's Response to the 2009 H1N1 Influenza Pandemic

G.K. SteelFisher and Others

Gillian SteelFisher and colleagues examined the public's response to the 2009 H1N1 pandemic through a comprehensive review of data from national public opinion polls and surveys. They present a range of findings.

[Full Text](#) | [PDF](#)



Clinical Aspects of Pandemic 2009 Influenza A (H1N1) Virus Infection NEJM

May 5, 2010 • COMMENTS (0)

MEDICAL PROGRESS

Clinical Aspects of Pandemic 2009 Influenza A (H1N1) Virus Infection

Writing Committee of the WHO Consultation on Clinical Aspects of Pandemic (H1N1) 2009 Influenza

Illness caused by the 2009 H1N1 virus has occurred in almost all countries, with more than 16,000 deaths from laboratory-confirmed cases reported to the WHO. This review by WHO experts summarizes the virologic, epidemiologic, and clinical data on the 2009 H1N1 virus and assesses future directions.

[Full Text](#) | [PDF](#) | [Supplementary Material](#)



Health Map



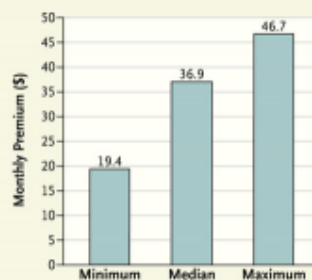
See an interactive map showing worldwide cases of H1N1 influenza. From [HealthMap](#)

PANDEMIC H1N1 NEWS CENTER

H1N1 news: Jan. 19, 2010

On the White House Blog Saturday, Kathleen Sebelius encouraged Americans become a "Flu Fighter" on Facebook by installing the DHHS's new Facebook app. "This application," she wrote, "gives people a fun way to encourage friends and family to get vaccinated." (1/16, The White House Blog)

About 1 in 5 Americans have been vaccinated against H1N1, according to the government's first detailed estimates of vaccination rates.



Health Insurance Exchanges — Making the Markets Work

NEJM • July 22, 2009

Richard G. Frank, Ph.D., and Richard J. Zeckhauser, Ph.D.

Americans purchase health insurance in various ways. Some buy individual policies. For them, medical underwriting is common, and preexisting conditions can preclude, limit, or dramatically increase the cost of coverage. Many buy insurance through small employers, which typically offer little or no choice of plan. Their premiums tend to be higher than those of consumers purchasing through large employers, which can bargain effectively on prices.

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Comparative Effectiveness — Thinking beyond Medication A versus Medication B

Smoking-Cessation Therapy	Odds Ratio (95% CI)
Financial incentive	
Labeler	



Players in Health Care Reform

WASHINGTON UPDATE



A Bumpy Road for Reform

John K. Iglehart

The legislative process is one of ebb and flow, particularly when politicians are confronted with issues that demand tough choices and divide the voters

[Blog Home](#)[« The HIV/AIDS Pandemic: A Looming Funding Crisis](#)

Policy Brief: Medicare Modifications

May 20th, 2010

by [Chris Fleming](#)

The latest health policy brief from *Health Affairs* and the Robert Wood Johnson Foundation examines the changes to Medicare contained in recently passed health reform legislation. This is the most recent in a series of briefs that offer more context than fact sheets but provide quicker reads than most background papers. The information in the briefs is objective and reviewed by *Health Affairs* authors and other specialists with years of expertise in health policy.

5

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Among the Medicare changes discussed in the new brief are:

Expanded prescription drug coverage. The newly enacted Patient Protection and Affordable Care Act strengthens Medicare prescription drug coverage subsidies for low-income Medicare beneficiaries. It also immediately begins phasing out the coverage gap known as the “doughnut hole” and fully closes the gap in 2020.

Expanded coverage of preventive services. Beginning in 2011, Medicare will pay the full cost of an annual wellness visit, and beneficiaries will pay no out-of-pocket costs for preventive services rated highly by the U.S. Preventive Services Task Force.

In addition, under health reform legislation, primary care practitioners will receive larger payments, higher-income households will face increased Medicare taxes, and private Medicare Advantage plans will see lower reimbursements unless they can demonstrate that they are providing high-quality care. The new legislation also gives Medicare more authority and resources to experiment with new payment



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The NEW ENGLAND JOURNAL OF MEDICINE

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- Overview
- Indications
- Contraindications
- Preparation
- ▶ Procedure
- Complications
- Postprocedural Care

Video player controls: Play/Pause, Progress bar (04:27 / 9:8), Volume, Captions, Full screen

Since this procedure is performed in extremely urgent circumstances, there is not time to drape the patient.

potential complications.

Ortega R, Ng L, Sekhar P, Song M. N Engl J Med 2008;358:e15, April 3, 2008.

Streaming Video Download Options PDF Summary

THE JOURNAL OF BONE & JOINT SURGERY

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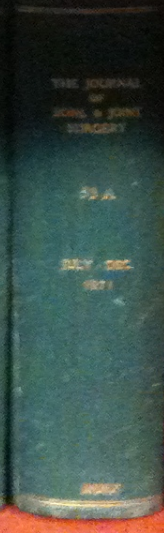
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Safety Syringes and Anti-Needlestick Devices in Orthopaedic Surgery

Wilmer L. Sibbitt, MD; Philip A. Band, PhD; Lawrence G. Kettwich, BS; Cristina R. Sibbitt, BS; Lori J. Sibbitt, BS; Arthur D. Bankhurst, MD

Background:

The American Academy of Orthopaedic Surgery (AAOS), The Joint Commission, the Occupational Safety and Health Administration (OSHA), and the Ne... [more]



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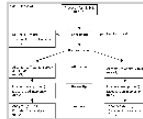
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Takuro Wada, MD; Masahiro Tatebe, MD; Yasuhiro Ozasa, MD; Osamu Sato, MD; Tomoko Sonoda, DDS; Hitoshi Hirata, MD; Toshihiko Yamashita, MD

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Peter Peichl, MD; Lukas A. Holzer, MD; Richard Maier, MD; Gerold Holzer, MD

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the business *of* a journal
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THE JOURNAL OF BONE & JOINT SURGERY

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Safety Syringes and Anti-Needlestick Devices in Orthopaedic Surgery
Wilmer L. Sabbitt, MD, Philip A. Band, PhD, Lawrence G. Kethwich, BS, Cristina R. Sabbitt, BS, Lori J. Sabbitt, BS, Arthur G. Bankhurst, MD
Background:
The American Academy of Orthopaedic Surgery (AAOS), the Joint Commission, the Occupational Safety and Health Administration (OSHA), and the National Institute for Occupational Safety and Health (NIOSH) have issued a joint statement regarding the use of safety syringes and anti-needlestick devices in orthopaedic surgery.

Scientific Articles | September 07, 2011

Clinical Outcomes of Corrective Osteotomy for Distal Radial Malunion: A Systematic Review of Opening and Closing Wedge Techniques
Takuro Wada, MD, Masahiro Takeda, MD, Yasuhiro Ozawa, MD, Osamu Sato, MD, Tomoko Senoda, DDS, Hitoshi Wada, MD, Toshihiro Yamashita, MD

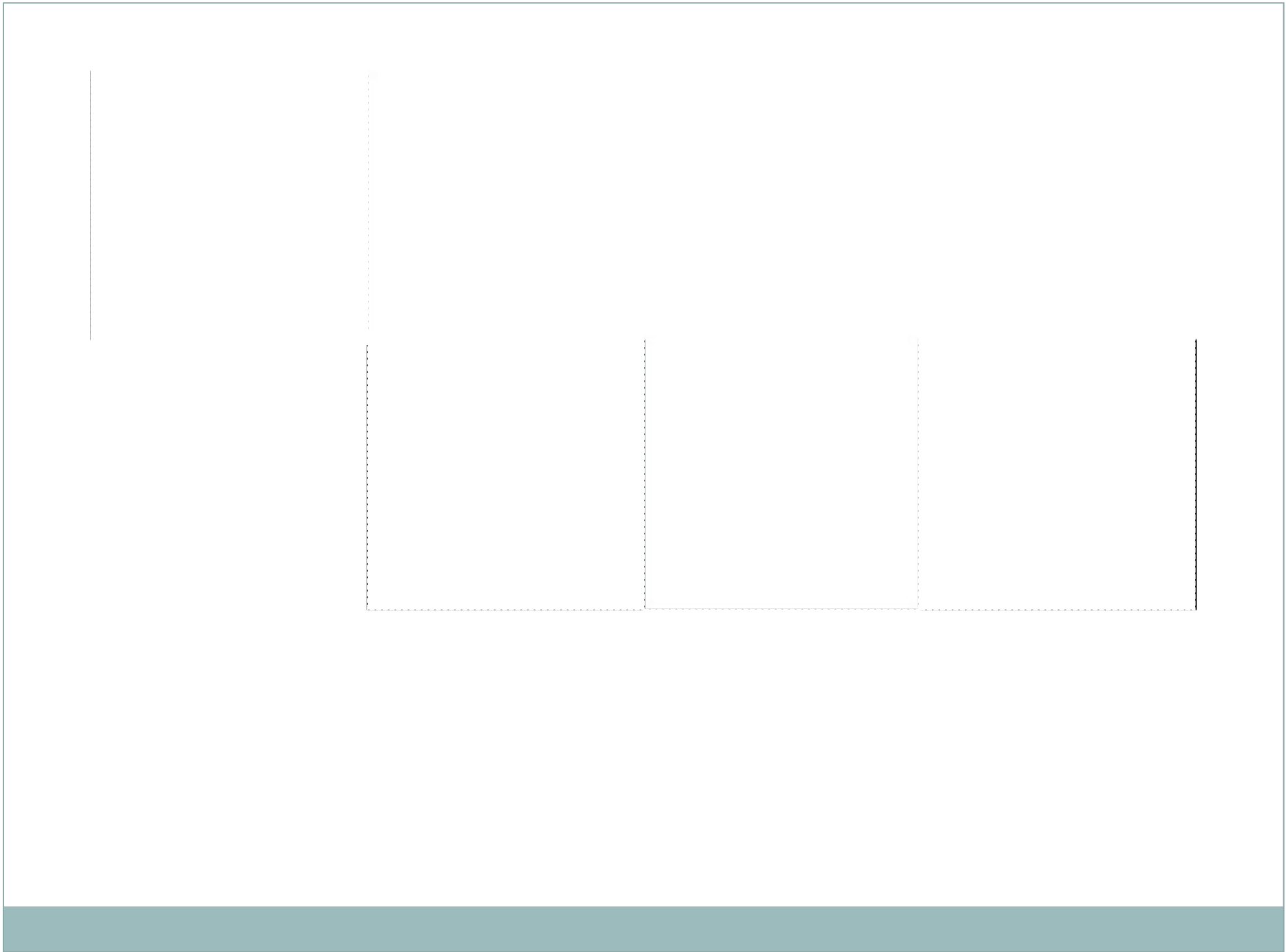
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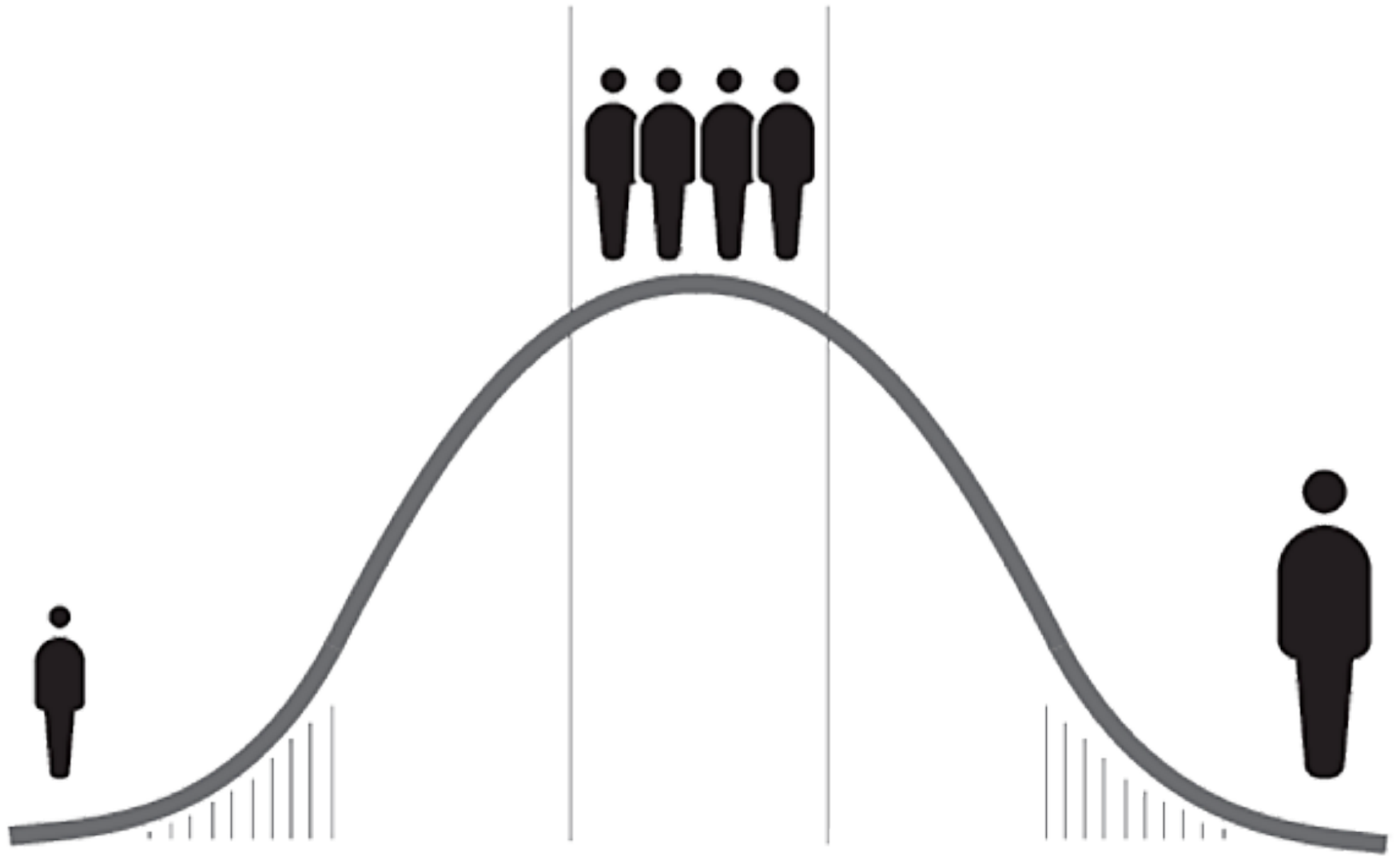
Parathyroid Hormone 1-84 Accelerates Fracture Healing in Distal Radius of Elderly Osteoporotic Women
Peter Petrol, MD, Lukas A. Hoelzer, MD, Richard Maier, MD, Gerald Hoelzer, MD

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Tackling the Challenge

- Small team – CEO, Chair of Trustees, EIC, Assoc. Publisher, Bus. Dev., Marketing
- Worked hard and fast – 8 weeks total time from initiation to final report





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PATIENT: SPUNK
RESIDENTS — BOSTON
PATIENT: ANDREW
NOGSAUX
WULFE
FRANCES
ALBRIGHT
RESIDENTS + FELLOW
PEP PAUL

Users and potential users

YOU HAVE MANY DIFFERENT USERS WITH MANY DIFFERENT NEEDS

The landscape of orthopedic information

INFORMATION HAS A FUNCTIONAL COMPONENT FOR SURGEONS

THE ORTHOPEDIC INFORMATION SPACE IS CHARGED WITH NO CLEAR LEADER

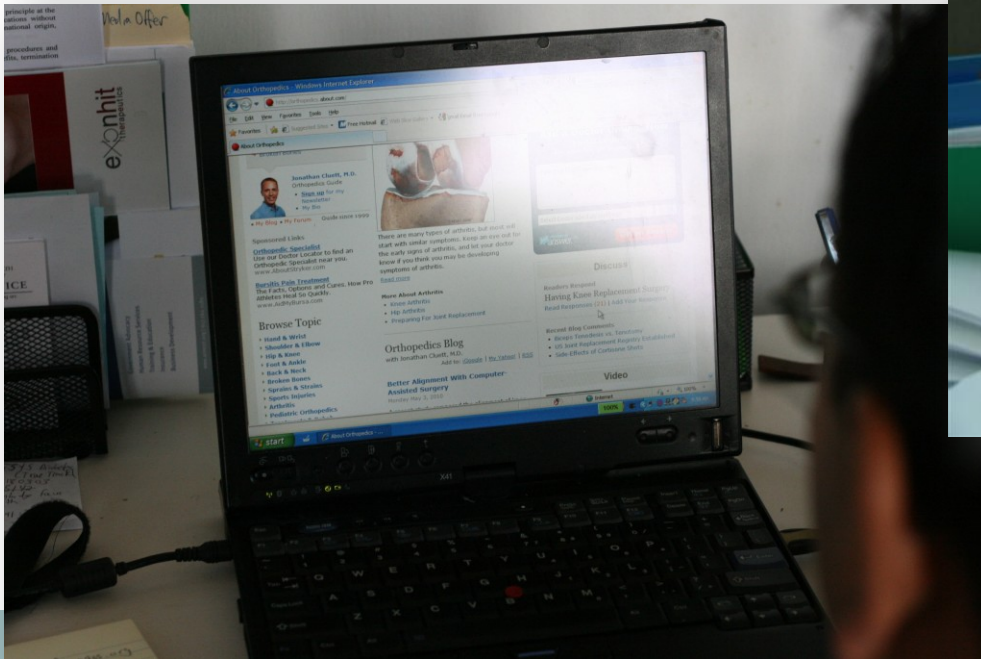
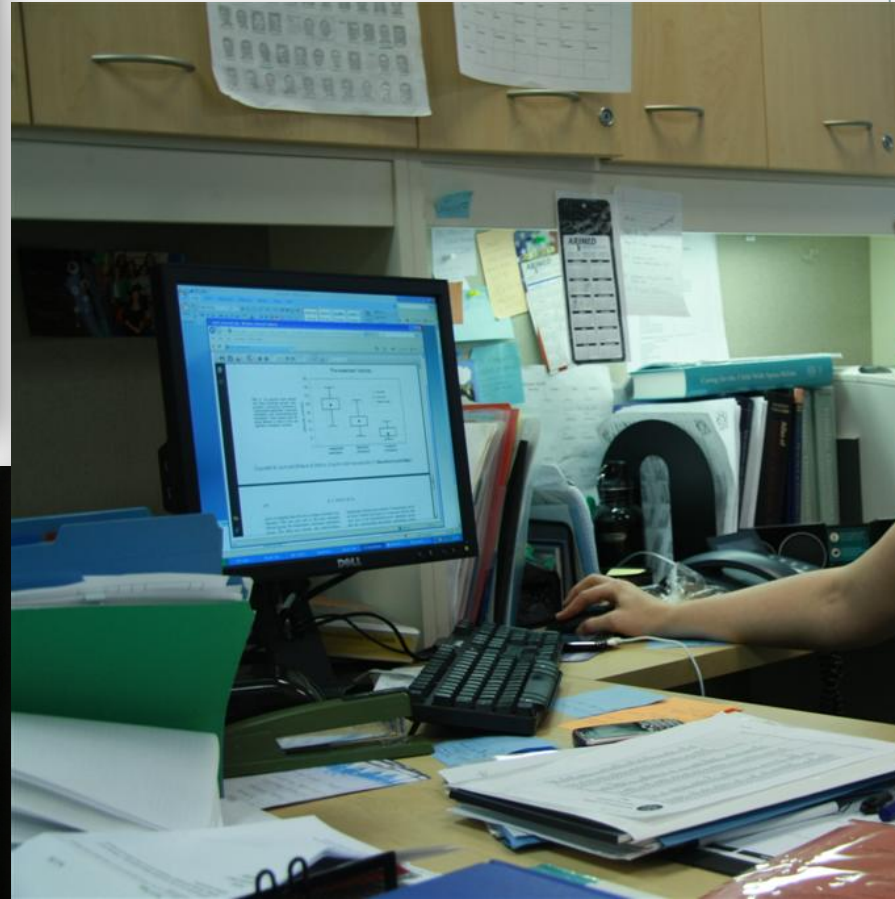
SURGEONS NEED DIFFERENT TYPES OF INFORMATION, WITH DIFFERENT STANDARDS

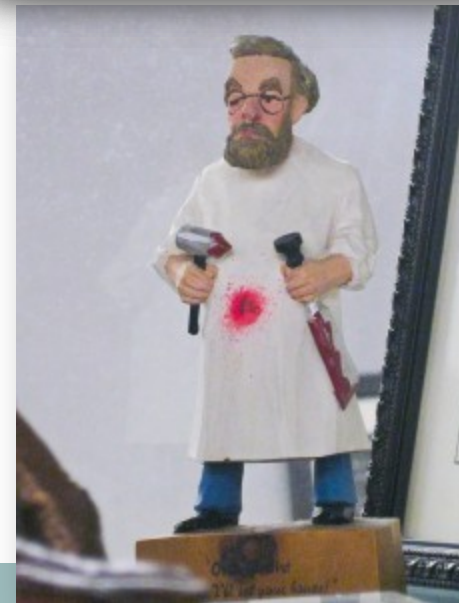
TWO MODES OF INFORMATION CONSUMPTION: SEEKING & BROWSING

INFORM CONSUMER FRAGMENTED

The nature of orthopedic information use







Insight – Design – Strategy

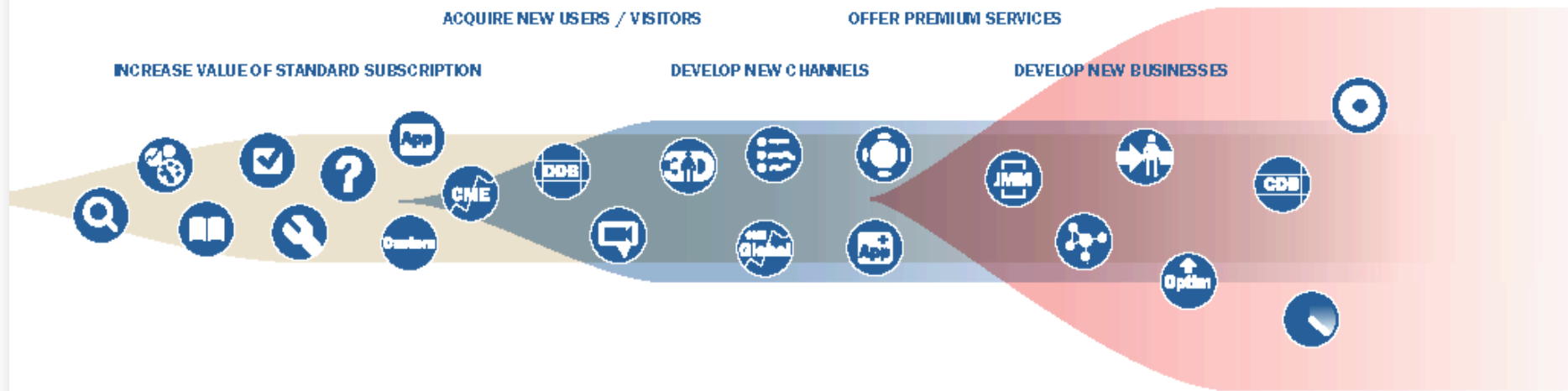


- Customer insights gleaned from interviews, observations, research, synthesis, and iteration
- Design refined through a process of concept generation, prototyping, and user testing
- Strategy informed by insights into business evolution, strategic vision, and implementation plans

Insights Galore



- Users and needs
 - The road from theory to evidence
- The modes of information consumption
 - How the current product fits into those modes
- The importance of organizing information
- The role of personal interactions
- Print and digital intersections



Enhance

Increase functionality of existing content to become more useful and relevant to the user community.

Build

Develop new content and resources to facilitate more efficient practice, learning and knowledge creation.

Expand

Take the lead in changing behaviors around knowledge amongst the broader orthopaedic care community.

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- Hip
- Infection
- Knee
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- Pain Management
- Pediatrics

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- anaphylaxis
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- ankylosis of hip
- ankylosis, bony

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- articular cartilage
- bone marrow
- chondrocytes
- common peroneal

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Clear All

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- amputation above-knee
- arthrocentesis
- aspiration of knee joint
- bacitracin

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Connections & Trends in Orthopaedic Surgery

- a...
- conduction
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- anesthesia (no sensation)
- ankle pain
- ankle swelling
- antalgic gait
- bacteremia
- blister
- cardiac arrhythmia
- clicking knee

- artificial limbs
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- bone cements
- bone nails
- bone plates
- bone screws
- bone wires
- canes
- cannulae, femoral
- condylar plate
- crutches

- female
- male

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- adolescent
- adult
- aged adult, 80 and over
- child
- middle-aged adult
- senior adult
- young adult

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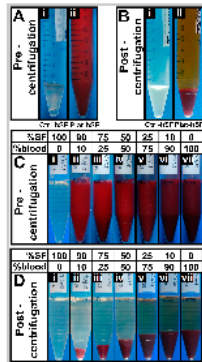
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Scientific Articles | May 16, 2012



Effect of Tibial Plateau Fracture Function and Composition

Brooke L. Ballard, MD; Jennifer M. A. PhD; Alexander Y. Hui, BS; Barbara Alexandra K. Schwartz, MD; Paul J.

Background: Intra-articular fractures may have a negative effect on patients who are typically too active and too young to be treated with a [more]

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- Foot & Ankle **CORRIDOR**
- Hand & Wrist **CORRIDOR**
- Hip **CORRIDOR**
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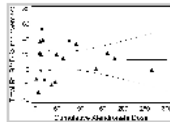
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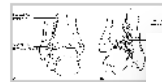
Scientific Articles | May 16, 2012



Efficacy of Alendronate in the Treatment of Low Bone Density in the Pediatric and Young Adult Population

Samuel Norman Dominguez-Bartmess, BS; Dan Tandberg, MD; Asad M. Cheema; Elizabeth A. Szalay, MD, CCD

Scientific Articles | May 16, 2012



Vascular Anatomy of the Tibiofibular

E. Johnson, MD; Jerer Klein, MD

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David Eduard Lebel
The Effect of Plat Tissues in the Pa

05/18/2012

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05/18/2012

Total Joint Surgeon - New Hampshire
NH - Concord Orthopaedics

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Faculty Position
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NEWSLETTER

KNEE SURGERY Highlights

Highlights and summaries of knee articles from top orthopaedic publications

Highlights Launch Director, Michelle Haché

Knee Surgery Newsletter | May 16, 2012

Update from The Knee Society Specialty Day Meeting

Michael A. Mont, MD

The 2012 Knee Society Specialty Day Meeting was held at the Annual Meeting of the American Academy of Orthopaedic Surgeons in San Francisco, California, on Saturday, Feb... [more]

Knee Surgery Newsletter | May 16, 2012

Update from the 2012 American Academy of Orthopaedic Surgeons Annual Meeting: Part II

Michael A. Mont, MD

Knee Surgery Newsletter | May 16, 2012

Patient-Specific Cutting Blocks for Primary Total Knee Arthroplasty: Do They Make Sense?

Craig J. Della Valle, MD

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3/28/2012

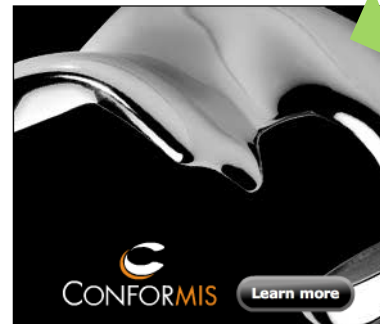
Acute Postoperative Renal Failure Following Insertion of an Antibiotic-Impregnated Cement Spacer in Revision Total Joint

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Gritti-Stokes Amputation in the Trauma Patient: Tips and Techniques



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02/16/2012

Foot and Ankle Surgeon

MA - Beth Israel Deaconess Medical Center

03/07/2012

Orthopaedic Trauma Position

KY - University of Louisville Dept. of Orthopaedic Surgery

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Faculty Position

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Putting research in context

Effect on Smoking Cessation Intervention on Results of Acute Fracture Surgery

A randomized controlled trial by Hans Neevel, MD, Johanna Adams, MD, PhD, Eva Samnegard, MD, PhD, Hanne Tonnesen, PhD, and Susi Ponzer, MD, PhD / *J Bone Joint Surg Am*. 2010;92:1335-1342



<http://tinyurl.com/8kqy8f>

LEVEL OF EVIDENCE

1

Very High Sample Size
Statistical confidence 97
patients = 4,000

Tobacco smoking has a significant negative effect on surgical outcomes. A randomized, controlled trial was done to find out if a 6-week smoking cessation program, started in the hospital, could reduce the number of complications following emergency fracture surgery.

In Stockholm, a group of daily smokers with a lower or upper extremity fracture were entered into a smoking cessation program consisting of 1 or 2 personal meetings and weekly telephone contacts for 6 weeks with a specially trained nurse. The patients were continuously encouraged not to smoke, and free nicotine substitution was offered. These patients were compared with a control group, which received general advice to stop smoking but no additional support.

All patients completed questionnaires about their current smoking status at 2-3 and 6-12 weeks. Their medical records were reviewed to compare the rates of complications between the intervention and control groups.

50% of the patients in the intervention group and 17% in the control group reported total abstinence from smoking at 2 weeks, and 43% and 20%, respectively, reported it at 6 weeks. Significantly more patients in the control group had a postoperative complication (38% vs. 20% in the intervention group). The development of more than one postoperative complication was also more common among the controls (see Table 1). Superficial wound infection and cast-related problems were the most common complications. Although the relevance of such minor complications may be debatable, they result in unnecessary health-care costs and suffering. There were few serious complications, but two cases of deep vein thrombosis and one pulmonary embolus

This is the first randomized controlled trial showing that smoking cessation intervention started in the hospital and continued for only 6 weeks decreases the number of postoperative complications. Although we could not confirm it, significantly more patients in the intervention group reported that they had quit smoking totally during the study period. The total staff time used for the intervention was <3 hours per patient, a modest cost. However, it was more difficult to enroll patients than we expected; only 18% of all smokers who had fracture surgery were enrolled.

Number of Complications	Intervention Group (N=49)	Control Group (N=485)
2	1 (2%)	5 (9%)
1	9 (18%)	16 (29%)
0	39 (80%)	34 (62%)

TABLE 1 No. of Patients with 1, 2, or 0 Complications

This may indicate that a large proportion of smokers are not reachable for any kind of smoking intervention. The patients who declined to participate were older and had a higher rate of hip fractures than the rest of the cohort. Their complication rate was high. Still, it should be noted that 60% to 80% of all smokers are known to want to quit smoking and have made attempts to do so. It is possible that the randomized controlled study setting made the patients hesitate to participate. Therefore, it is likely that a higher percentage of smokers with acute injuries could be reached if the smoking cessation program were to be offered as part of a clinical routine.

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Evidence for an Inherited Predisposition to Lumbar Disc Disease

By Alpesh A. Patel, MD, William Ryan Spiker, MD, Michael Daubs, MD, Darrel Brodke, MD, and Lisa A. Cannon-Albright, PhD

Investigation performed at the Departments of Orthopaedics and Biomedical Informatics, University of Utah School of Medicine, Salt Lake City, Utah

Background: A genetic predisposition for the development of symptomatic lumbar disc disease has been suggested by several twin sibling studies and subsequent genetic marker studies. The purpose of the present study was to define population-based familial clustering among individuals with a diagnosis of, or treated for, lumbar disc herniation or disc degeneration.

Methods: The Utah Population Database allows analysis of combined health and genealogic data for over one million Utah residents. We used the International Classification of Diseases, Ninth Revision, diagnosis codes entered in patient records to identify patients with a diagnosis of either lumbar disc herniation or lumbar disc degeneration and genealogic data. The hypothesis of excess relatedness (familial clustering) was tested with use of the Genealogical Index of Familiality, which compares the average relatedness of affected individuals with expected population relatedness. Relative risks in relatives were estimated by comparing rates of disease in relatives with expected population rates (estimated from the relatives of matched controls). This methodology has been previously reported for other disease conditions but not for spinal diseases.

Results: The Genealogical Index of Familiality test for 1264 patients with lumbar disc disease showed a significant excess relatedness ($p < 0.001$). Relative risk in relatives was significantly elevated in both first-degree (relative risk, 4.15; $p < 0.001$) and third-degree relatives (relative risk, 1.46; $p = 0.027$).

Conclusions: Excess relatedness of affected individuals and elevated risks to both near and distant relatives was observed, strongly supporting a heritable contribution to the development of symptomatic lumbar disc disease.

Level of Evidence: Prognostic Level II. See Instructions to Authors for a complete description of levels of evidence.

Back pain is the second most common reason for patients to seek medical treatment in the United States¹, and the lifetime risk of low back pain is estimated to be 84%². The socioeconomic impact of low back pain is difficult to overstate as a recent study has shown that the total cost of low back pain in the United States exceeds \$100 billion per year³. With low back pain, lumbar disc degeneration is a common finding. Along with disc degeneration, lumbar disc herniation may occur, resulting in back and/or leg pain symptoms. Despite the prevalence of lumbar disc disease, its etiology is not

completely understood. Previous studies have suggested a multifactorial etiology including contributions from mechanical stresses to the spine⁴, age-dependent disc degeneration⁵, biochemical factors⁶, and genetics⁷. Although several studies have suggested a familial predisposition⁸⁻¹⁰, we are aware of no study that has evaluated the familial clustering of lumbar disc disease on a population-based, multigenerational level.

The Utah Population Database allows the combination of a computerized genealogy of the Utah founding pioneers and

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A commentary by David A. Wong, MD, MSc, FRCS(C), is available at www.jbjs.org/commentary and is linked to the online version of this article.

Image Quizzes

April 18, 2012

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A Fifty-nine-Year-Old Man with Polytrauma

Question

Answer

Discussion

What is the most likely cause of the postoperative neurological abnormalities?

Choose one:

- Botulism
- Guillain-Barré syndrome
- Psychiatric illness
- Myasthenia gravis

449 Total Responses

Submit Answer

How Others Chose

A Fifty-nine-Year-Old Man with Polytrauma

A fifty-nine-year-old man was involved in a motorcycle crash when he lost control and struck a utility pole. He sustained multiple injuries, including a Gustilo-Anderson grade-II open right femoral fracture, a Gustilo-Anderson grade-IIIa open left femoral fracture (Figs. 1 and 2), a Schatzker-I closed right tibial plateau fracture, and a closed left stellate patellar fracture. He was seen in the emergency department of our academic medical center and was resuscitated according to Advanced Trauma Life Support (ATLS) guidelines. The on-call orthopaedic surgery resident was present for the evaluation of the above-detailed injuries. Prophylactic cefazolin and gentamicin were given in the emergency department, but no tetanus toxoid was administered as the patient had received a tetanus toxoid booster within the previous five years.

Once the patient was deemed medically stable to undergo surgery, he underwent debridement of the right and left open femoral fractures in the operating room. Contamination of the proximal fracture fragment of the left femur was noted intraoperatively, and three million units of penicillin were given. The right femoral fracture was treated with retrograde intramedullary nail fixation (Synthes USA, West Chester, Pennsylvania). Given the bone contamination of the left femur, the left femoral fracture was preliminarily treated with external fixation. The tibial plateau and patellar fractures were not addressed surgically in the initial operative setting.

Postoperatively, the patient was monitored in the step-down intensive care unit by the multidisciplinary trauma surgery team. He received intravenous (IV)



Fig. 1



Fig. 2

Question Answer Discussion

A Sixty-eight-Year-Old Woman with Shoulder and Knee Pain

What is the diagnosis?

- Non-Hodgkin lymphoma 137
- Hodgkin lymphoma 64
- Bacterial osteomyelitis 146
- Fungal infection 84

Close Submit Answer



A sixty-eight-year-old woman presented to our orthopaedic office with severe pain in the right shoulder and mild pain in the right knee. She had been diagnosed as having Waldenström macroglobulinemia seventeen years earlier during a workup for osteoporosis. She was treated with chemotherapy (rituximab), and the disease remained well controlled. Her medical history was notable only for mild mitral valve prolapse, for which she usually took oral antibiotics before dental procedures. She had not, however, taken antibiotics prior to her most recent dental cleaning six months prior to presentation. Pain developed in the right shoulder and knee three months prior to presentation at our institution. She had also lost 10 lb (4.5 kg) and had occasional night sweats, but reported that she had had no fevers. Anti-inflammatory medications partially relieved the pain. During the subsequent months, the shoulder pain worsened.

On physical examination, the patient demonstrated full motion of the shoulder with a dull ache throughout the arc of motion. She had mild tenderness to palpation of the soft tissues around the shoulder with palpable soft-tissue fullness, but there was no localized swelling or erythema. She demonstrated full motor strength in all muscle groups

and had no sensory deficits. All distal pulses were palpable. The examination of the knee had unremarkable findings, including a full, painless range of motion. There was no effusion or joint line tenderness, and examination of the cruciate and collateral ligaments had normal findings as well. She exhibited a normal gait.



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