

# ENCOURAGING OPTIMAL USE OF DIAGNOSTIC IMAGING IN LOW BACK PAIN

## A RADIOLOGIST'S PERSPECTIVE

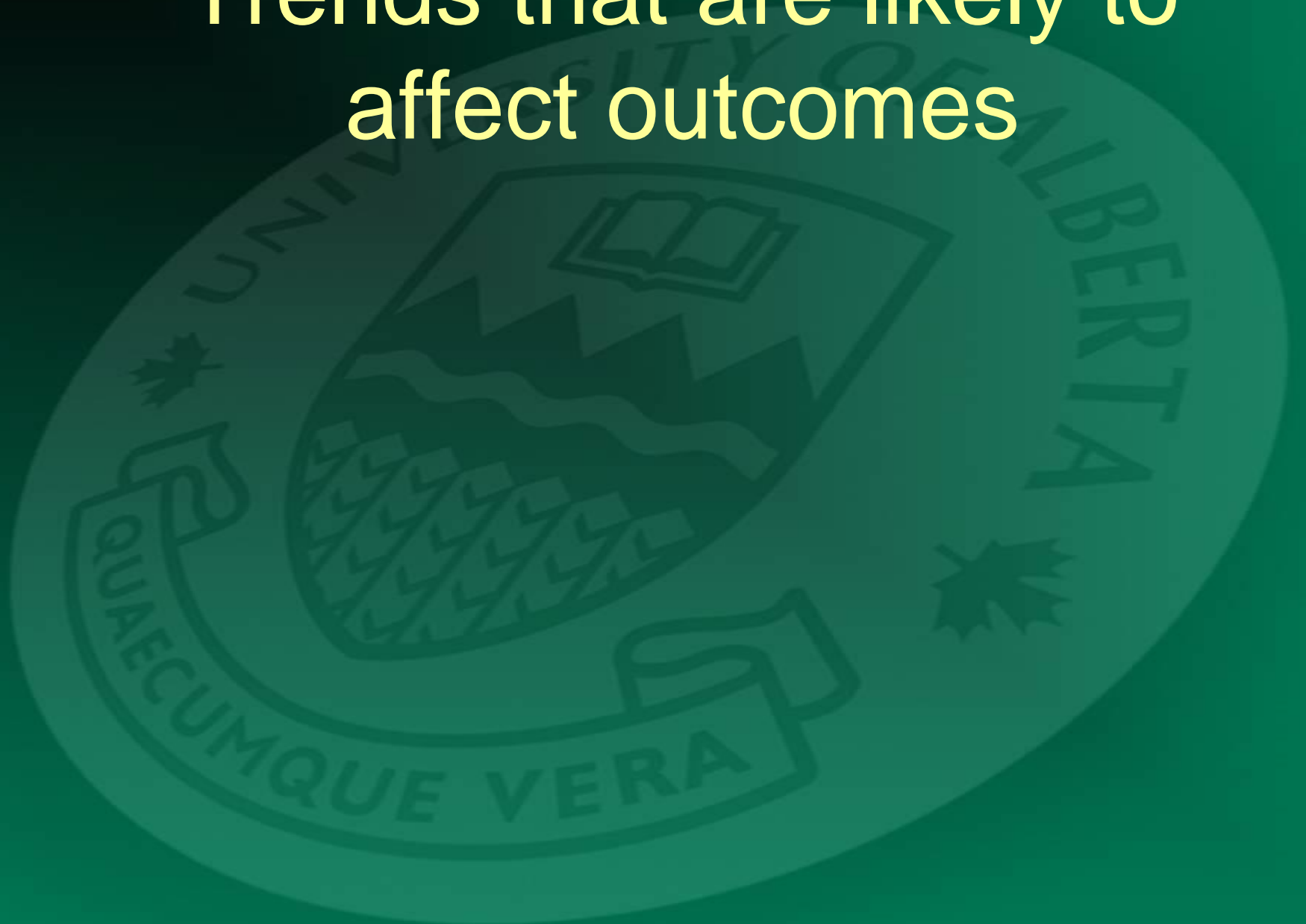
Dr. Robert Lambert

Chair of Radiology and Diagnostic Imaging

University of Alberta



# Trends that are likely to affect outcomes



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## New generation of physicians


- Are more likely to use electronic devices and electronically based guidelines but do everything faster

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## New generation of physicians

- Are more likely to use electronic devices and electronically based guidelines  
but do everything faster
- Are less tolerant of clinical uncertainty
  - Therefore will investigate more

# Trends that are likely to



**university  
of Alberta  
hospitals**

EDMONTON, ALBERTA CANADA  
DEPARTMENT OF RADIOLOGY  
AND DIAGNOSTIC IMAGING

### OUT-PATIENT CONSULTATION

#### PATIENT IDENTIFICATION

LAST NAME \_\_\_\_\_  
 CIVIL STATUS (MARRIED) \_\_\_\_\_  
 SEX (M) (F) \_\_\_\_\_  
 BIRTH DATE \_\_\_\_\_  
 BIRTH PLACE \_\_\_\_\_  
 HOMETOWN \_\_\_\_\_  
 PRESENT ADDRESS \_\_\_\_\_  
 PHONE CLASS (R) HOME \_\_\_\_\_  
 PROFESSION (PHYSICIAN) \_\_\_\_\_  
 PHYSICIAN'S OFFICE \_\_\_\_\_  
 R.F. NUMBER \_\_\_\_\_

**TO BE COMPLETED BY OUT-PATIENT AREA**

EXAMINATION REQUESTED: ONLY ONE PER CONSULTATION FORM \_\_\_\_\_

DATE OF REQUEST \_\_\_\_\_ 20\_\_\_\_

DATE/TIME EXAM \_\_\_\_\_ 20\_\_\_\_

BOOKED FOR \_\_\_\_\_ HRS \_\_\_\_\_

PREVIOUS X-RAYS AT U.A.H. \_\_\_\_\_ 20\_\_\_\_

EXAMINATIONS REQUIRING BOOKING  
Call 407-8843

**TO BE COMPLETED BY ATTENDING PHYSICIAN**

DIAGNOSIS: \_\_\_\_\_

CLINICAL HISTORY: \_\_\_\_\_

L.M.P. \_\_\_\_\_

PHYSICIAN'S SIGNATURE \_\_\_\_\_

RAPID REPORT REQUIRED  PHONE NO.: \_\_\_\_\_

**RADIOLOGY DEPT. USE ONLY**

EXAMINATION PERFORMED:  NO CHANGE

ADDITIONS: \_\_\_\_\_  
OR DELETIONS: \_\_\_\_\_

EXAMINATION NOTES: \_\_\_\_\_

HISTORY OF ALLERGY: \_\_\_\_\_

FLUORO TIME \_\_\_\_\_ MIN X-RAY ROOM \_\_\_\_\_

RADIOLOGIST \_\_\_\_\_ RESIDENT \_\_\_\_\_  
 TECHNICIAN \_\_\_\_\_ STUDENT \_\_\_\_\_

**EXTRA COPY OF REPORT TO:**

ASSIGNED I.D. NUMBER \_\_\_\_\_

SOCIAL SECURITY NUMBER \_\_\_\_\_



WCB  DVA  OUT OF PROVINCE

PLAN NAME AND NUMBER \_\_\_\_\_

VIEW	COMMENTS	EDGE	QUANTITY	SIZE	QUANTITY	SIZE	QUANTITY
		PARALLEL / OCCIPITAL		11 x 14		14 x 38	
				35 mm x 25 mm		35 mm x 50 cm	
		18 x 10		14 x 14		14 x 51	
		18 cm x 24 cm		35 cm x 35 cm		25 mm x 132 mm	
		9 x 9		7 x 11		OTHER	
		23 cm x 27 cm		16 cm x 43 cm		C.M.P. <input type="checkbox"/> 35 mm	
		10 x 12		14 x 17		100 mm <input type="checkbox"/>	
		24 cm x 30 cm		35 cm x 43 cm			

DATE \_\_\_\_\_ 20\_\_\_\_

**OUT-PATIENT RADIOLOGY CONSULTATION FORM**

Affix patient label within this box.

#### Patient Care Orders

If pediatric patient: Weight \_\_\_\_\_ kg

- Check Caution Sheet for any allergies before ordering.
- Medication orders must include drug, dose, route, frequency and, if applicable, duration.
- If medication order is STAT or URGENT, notify RN and place a large  in the STAT/URGENT box at right.
- Do not use prohibited abbreviations. (See information on reverse.)

STAT / URGENT

Use checkbox for medication orders ONLY

Day / Mon / Yr	Time

**PATIENT STATUS:**  
 DISMISSED    TIME: \_\_\_\_\_

CH-0908 Apr 2007 LRH1/Stallery use only

Do Not Write in This Space - Will Not Scan

PAGE 1 OF 1

of use bas ng cli stig

Do Not Write in This Space - Will Not Scan

Do Not Write in This Space - Will Not Scan

# Trends that are likely to affect outcomes



EDMONTON, ALBERTA CANADA  
DEPARTMENT OF RADIOLOGY  
AND DIAGNOSTIC IMAGING

## OUT-PATIENT CONSULTATION

TO BE COMPLETED BY OUT-PATIENT AREA

EXAMINATION REQUESTED: *ONLY ONE PER  
CONSULTATION FORM*



Alberta Health  
Services



Covenant  
Health

## Patient Care Orders

If pediatric patient: Weight \_\_\_\_\_

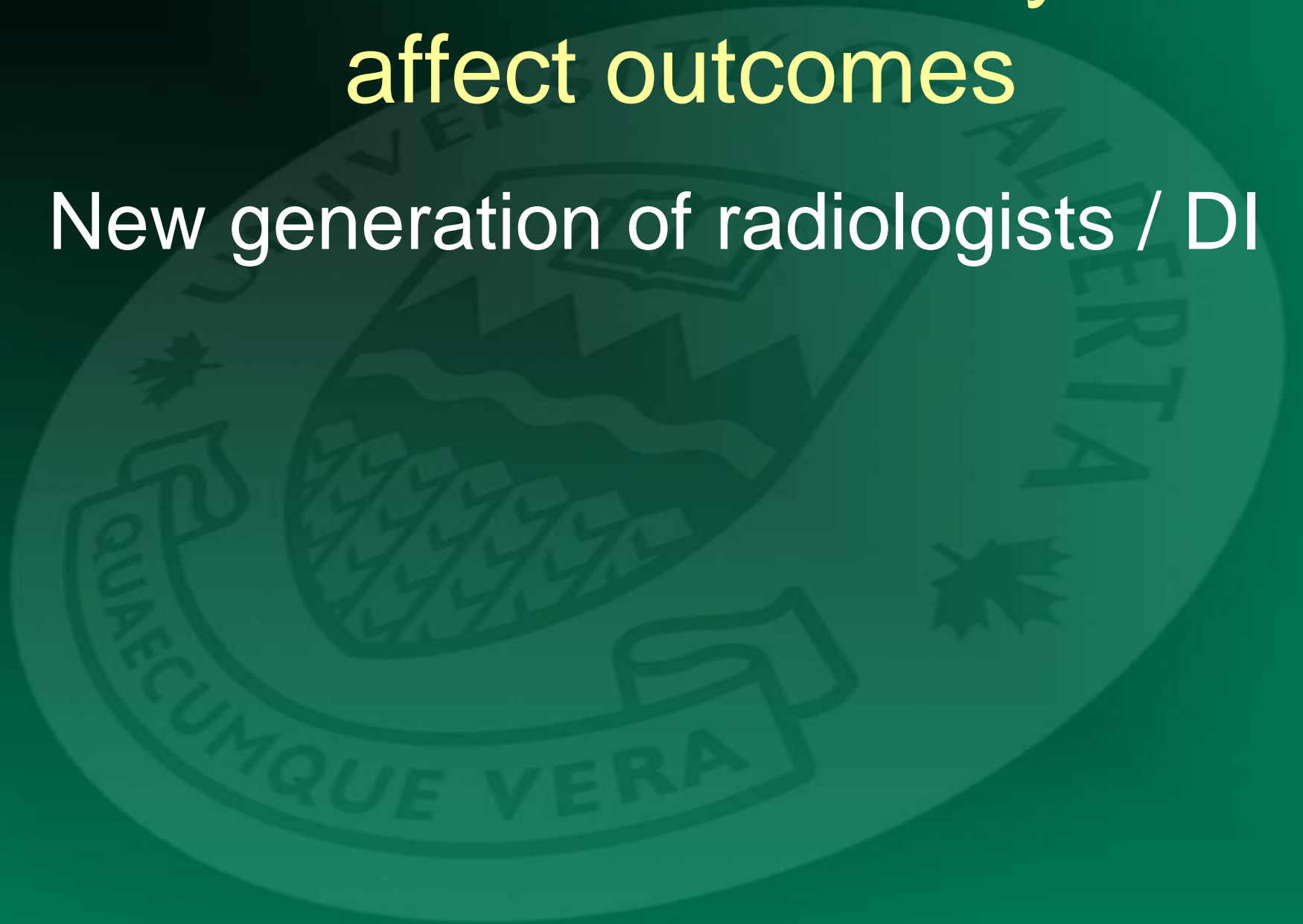
1. Check Caution Sheet for any allergies before
2. Medication orders must include drug, dose, route

• Are less tolerant of clinical uncertainty

– Therefore will investigate more

# Trends that are likely to affect outcomes

New generation of radiologists / DI



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## New generation of radiologists / DI

- Are more knowledgeable about DI but have less clinical experience



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## New generation of radiologists / DI

- Are more knowledgeable about DI but have less clinical experience
- New tests can show much more but will show more incidental findings
- Are less tolerant of clinical uncertainty and will investigate more
  - “suggest .... If clinically indicated”

# Trends that are likely to affect outcomes

## New generation of patients

- Are more knowledgeable about health care but understanding is limited

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- Are less tolerant of clinical uncertainty and will want to be investigated more

# Trends that are likely to affect outcomes

## New generation of patient-physician interaction

- Patients are less likely to have their own GP
- Even if they do have a GP, they are less likely to see their own GP
- Patients are more likely to involve multiple healthcare providers in their care

# Trends that are likely to affect outcomes

## Faster pace of clinical practice

- ↑ in number of requests
  - 20 per day (1992) – 400 per day (2010)

# Trends that are likely to affect outcomes

## Faster pace of clinical practice

- ↑ in number of requests
  - 20 per day (1992) – 400 per day (2010)
- ↓ Information on the request form



# Trends that are likely to

Faster

- ↑ in number of patients
- 20 per cent
- ↓ Informal

es  
Practice

y (2010)  
orm

09-24-10:03:36PM 1720 400 4550

Alberia Health Services | Covenant Health

**Outpatient MRI Consultation**

Please complete and sign consultation form and return to one of the sites identified below. PLEASE PRINT.

Requests for children under 17 years old must be sent to the UAH site.

All patients will be booked at the first appropriate, available booking slot in the region unless a specific site is requested.

Site Hospital ID # UAF  
 Patient's Last Name \_\_\_\_\_  
 First Name \_\_\_\_\_  
 DOB Day \_\_\_\_\_  
 Personal Health # \_\_\_\_\_  
 Home Phone # \_\_\_\_\_  
 Patient Address (in full) \_\_\_\_\_  
 Postal Code \_\_\_\_\_

RAH: \_\_\_\_\_ Fax # \_\_\_\_\_  
 Bookings: \_\_\_\_\_  
 If specific site: \_\_\_\_\_  
 Referring Physician Phone # \_\_\_\_\_  
 Ordering Physician \_\_\_\_\_  
 Extra Report: \_\_\_\_\_  
 Examination: spine and sacroiliac joints

Grey Nuns  
 Fax # \_\_\_\_\_  
 Bookings: \_\_\_\_\_  
 Phone # \_\_\_\_\_  
 Signature \_\_\_\_\_

Relevant History: osteoporosis/spine/joints

Previous Surgical History: None

**PLEASE NOTE: For the patient's SAFETY, MRI examinations will NOT be booked unless this section is completed IN FULL.**

Previous History:  
 Cardiac Pacemaker .....  Yes  No  
 Metallic Foreign Body .....  Yes  No  
 Metallic Vascular Clips .....  Yes  No  
 Has the patient EVER had any metal fragments in the eyes, or had an injury to the eyes with metal? ...  Yes  No  
 Is the patient PREGNANT? .....  Yes  No  
 Last menstrual period: 9/6-2  
 Patient Weight (kg) 76.2

Relevant Previous Imaging:  
 • Films must arrive 3 days prior to elective booking.  
 • Films must accompany patient for urgent booking.  
 • Previous imaging report MUST be FAXED with Consultation Form

CT:  No  Yes Where? \_\_\_\_\_ X-Rays:  No  Yes Where? M10  
 Angio:  No  Yes Where? \_\_\_\_\_ US:  No  Yes Where? \_\_\_\_\_  
 MRI:  No  Yes Where? UoFA Nuc Med:  No  Yes Where? \_\_\_\_\_

Stamp: UAH MRI AUG 24 2010

**FOR DEPARTMENT USE ONLY**  
 Date / Time Received \_\_\_\_\_ Date / Time of appointment 23 Nov 10 20:40  
 Received by \_\_\_\_\_ Approved by (Dr.) \_\_\_\_\_  
 Priority:  P1  P2  P3  P4 674

CH-0164 (also e-form) Feb 2005

# Trends that are likely to

Examination: \_\_\_\_\_

spine and sacroiliac joints

Relevant History: \_\_\_\_\_

ankylosing spondylitis.

Previous Surgical History: \_\_\_\_\_

None

**PLEASE NOTE:** For the patient's **SAFETY**, MRI examinations will **NOT** be booked unless this section is completed **IN FULL**.

Previous History:

Cardiac Pacemaker .....  Yes  No

Metallic Foreign Body .....  Yes  No

Metallic Vascular Clips .....  Yes  No

Has the patient **EVER** had any metal fragments in the eyes, or had an injury to the eyes with metal? ...  Yes  No

Is the patient **PREGNANT**? .....  Yes  No

Last menstrual period: \_\_\_\_\_

Patient Weight (kg) \_\_\_\_\_

96.2

Relevant Previous Imaging:

- Films must arrive 3 days prior to elective booking.
- Films must accompany patient for urgent booking.
- Previous imaging report **MUST** be **FAXED** with Consultation Form

CT:  No  Yes Where? \_\_\_\_\_

Angio:  No  Yes Where? \_\_\_\_\_

MRI:  No  Yes Where? UofA

X-Rays:  No  Yes Where? MHC

US:  No  Yes Where? \_\_\_\_\_

Nuc Med:  No  Yes Where? \_\_\_\_\_

UAF MRI  
AUG 24 2010  
RECEIVED

FOR DEPARTMENT USE ONLY

# Trends that are likely to affect outcomes

## Faster pace of clinical practice

- ↑ Trend for referring physician to put the minimum amount of information that will pass the approval filter
- ↓ % of requests that the radiologist will reject / challenge

# Trends that are likely to affect outcomes

Faster pace of clinical practice

Radiologists world wide now see their role at the front end as

- Ensuring safety
- Assigning priority
- Watching out for egregious misuse

# Radiologist Concerns

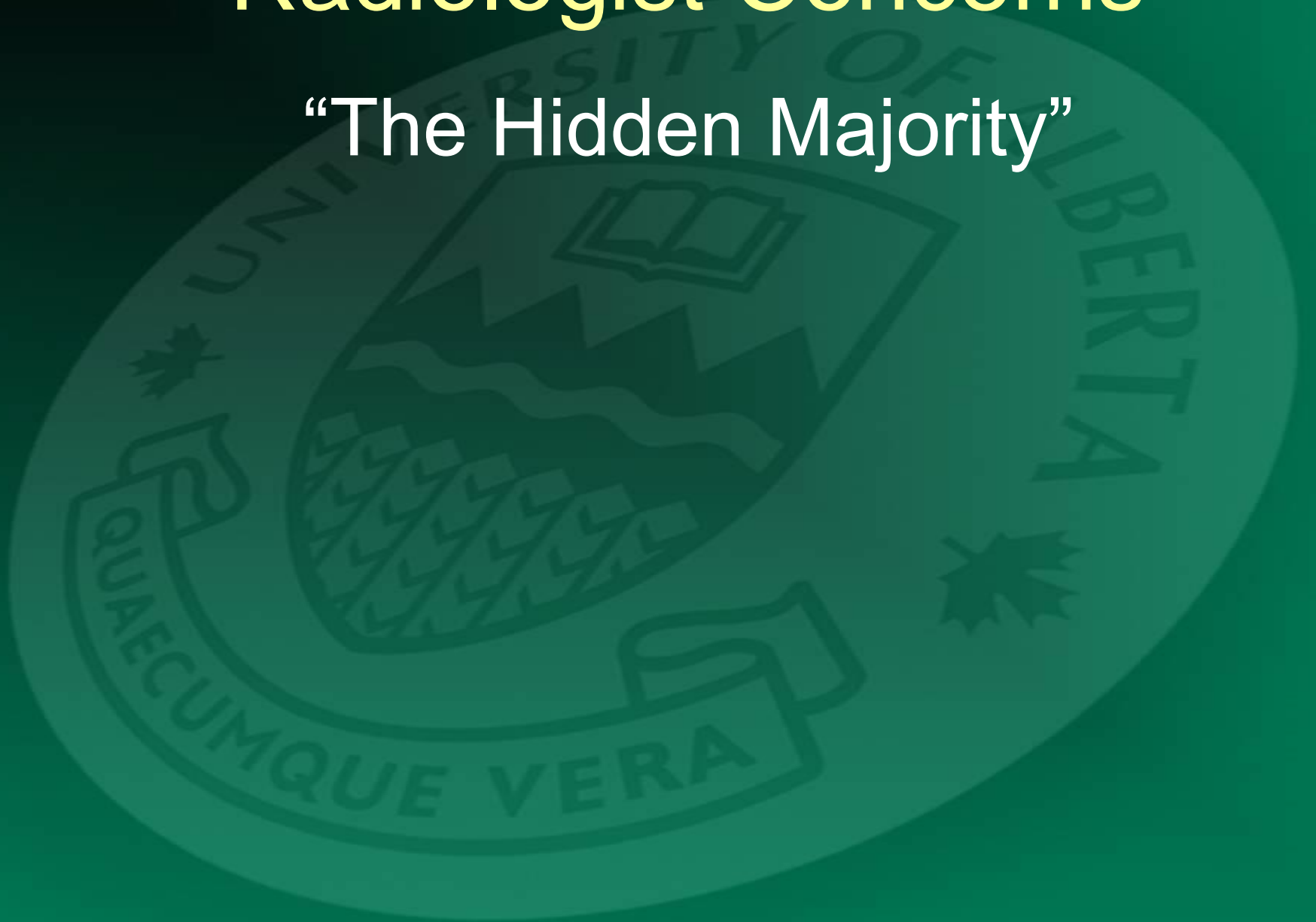
## Radiation

We would recommend

- Try to image less
- If we have to image, use non-radiation methods in the younger age groups

# Radiologist Concerns

“The Hidden Majority”



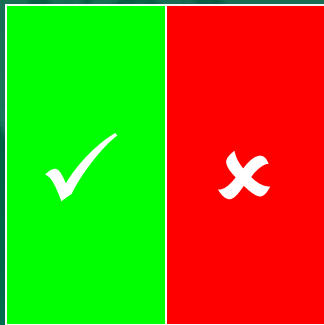
# Radiologist Concerns

## Current Practice

Patients getting  
MRI for LBP

If 50% of MRI for LBP  
was appropriate and  
50% was inappropriate

—

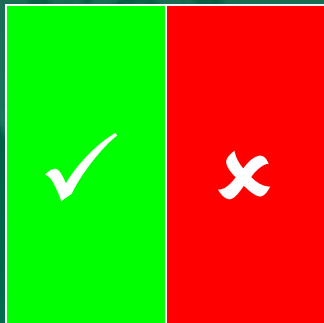


Would that be good or  
bad?

# Radiologist Concerns

## Current Practice

Patients getting  
MRI for LBP



“The Hidden Majority”

x

Patients not getting  
MRI for LBP



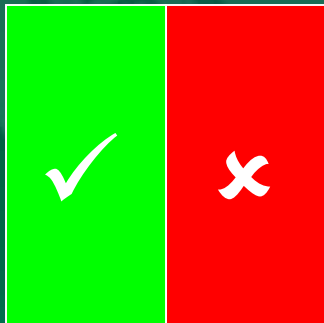


# Radiologist Concerns

## Possible scenario

- ✓ 90% of patients that need MRI - get it
- ✗ 90% of patients that don't need MRI – don't get it

Patients getting  
MRI for LBP



“The Hidden Majority”

✗

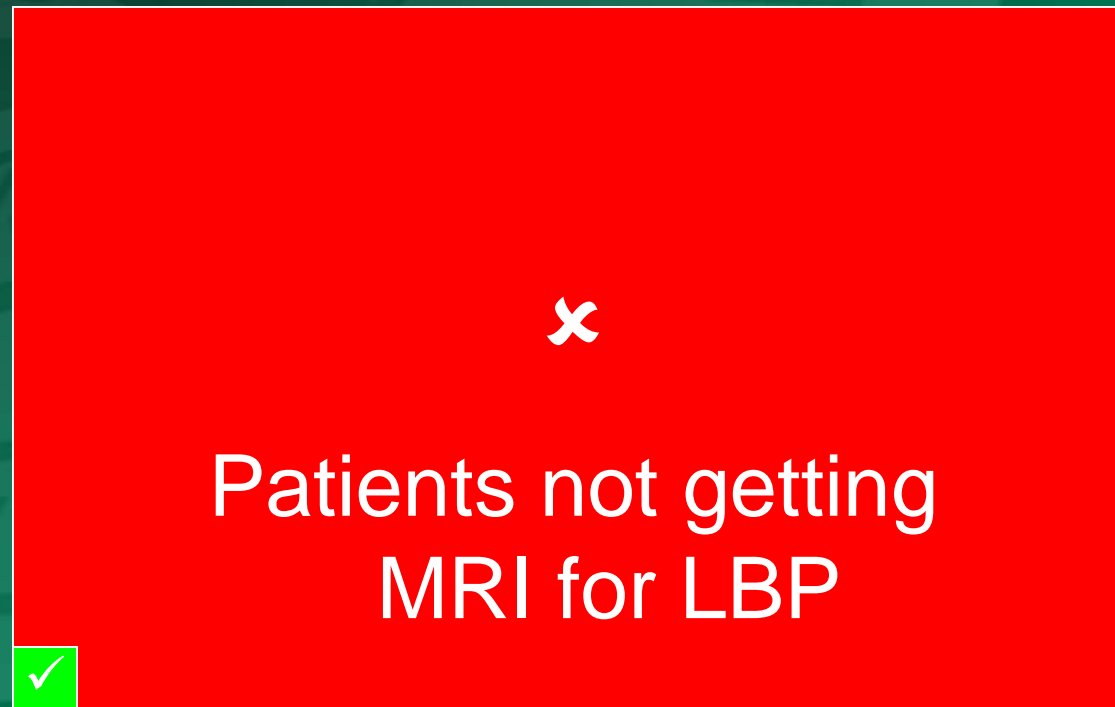
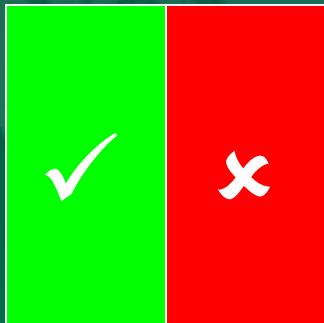
Patients not getting  
MRI for LBP



# Radiologist Concerns

Would new Guidelines result in increased use of DI in patients not currently being imaged?

Patients getting  
MRI for LBP



Patients not getting  
MRI for LBP

# ENCOURAGING OPTIMAL USE OF DIAGNOSTIC IMAGING IN LOW BACK PAIN

## Thank You

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