COST CONSCIOUS AND HIGH-VALUE CARE

Mutually Exclusive, or Complementary Aims?
OBJECTIVES

- Define High Value Care (HVC) and appreciate its importance
- Identify and understand the basic principles of HVC
- Recognize resources available to learn about HVC
- Apply principles of HVC to your patient care
CASE #1

A 67-year-old female with coronary artery disease, hypertension, chronic kidney disease stage 4, COPD, and type II DM presents for preoperative evaluation prior to a cataract surgery. She states she is able to mow her lawn and walk for several miles at a brisk pace without chest pain, chest pressure or shortness of breath. She has no other active complaints on review of systems.
CASE #1

What preoperative testing is indicated?

1. None
2. CBC and BMP
3. CBC, BMP and EKG
4. CBC, BMP, EKG and chest x-ray
Case #2

- Mr. M is a 75 year-old man with OA presenting with acute-on-chronic right hip pain. He slipped out of bed this morning and is now unable to bear weight on his right leg.
- Exam is notable only for moderate tenderness over the right hip.
- Hip and pelvis x-rays were negative for fracture.

Should he have further imaging? Which type?
OBJECTIVES

- Define High Value Care (HVC) and appreciate its importance
- Identify and understand the basic principles of HVC
- Recognize resources available to learn about HVC
- Apply principles of HVC to your patient care
Value = \frac{Benefit}{Cost}
WHY SHOULD WE CARE?

- Health care costs are unsustainable
- Physicians can play a key role
- Residents and medical students currently get little or no training
- Within the current healthcare system, no real disincentive to curb providers’ ordering practices
HEALTH SYSTEM NEED

Healthcare costs in the United States are increasing at an unsustainable rate:

- $253 billion in 1980
- $714 billion in 1990
- $2.6 trillion in 2010
- $3.2 trillion in 2015

Boston: Health Reform Program, Boston University School of Public Health; 2005
~30% of costs are wasted

Percentage of Healthcare Waste by Category Totaling $700 Billion

- Preventable Conditions and Avoidable Care 6%
- Lack of Care Coordination 6%
- Provider Inefficiency and Errors 12%
- Administrative System Inefficiencies 17%
- Fraud and Abuse 19%
- Un warranted Use 40%
WE ARE ORDERING MORE TESTS…

US PHYSICIANS’ VIEWS ABOUT CONTROLLING HEALTH CARE COSTS

- 2556 physicians responded to the survey

- Who has a “major responsibility” for reducing health care costs?
  - trial lawyers (60%)
  - insurance companies (59%)
  - hospitals and health systems (56%)
  - pharmaceutical and device manufacturers (56%)
  - patients (52%)
  - practicing physicians (36%)

- **CONCLUSION:** “US physicians reported having some responsibility to address health care costs in their practice and expressed general agreement about several quality initiatives to reduce cost but reported less enthusiasm for cost containment involving changes in payment models.”

_Tilbert et.al, JAMA. 2013;310(4):380-388_
WE HAVE MET THE ENEMY AND HE IS US.
Physicians are responsible for 87% of wasteful spending.
OBJECTIVES

- Define High Value Care (HVC) and appreciate its importance
- Identify and understand the basic principles of HVC
- Recognize resources available to learn about HVC
- Apply principles of HVC to your patient care
IDENTIFY AND UNDERSTAND THE BASIC PRINCIPLES OF HVC

- **Step one:** Understand the benefits, harms, and relative costs of the interventions that you are considering.

- **Step two:** Decrease or eliminate the use of interventions that provide no benefits and/or may be harmful.

- **Step three:** Choose interventions and care settings that maximize benefits, minimize harms, and reduce costs (using comparative-effectiveness and cost-effectiveness data).

- **Step four:** Customize a care plan with the patient that incorporates their values and addresses their concerns.

- **Step five:** Identify system level opportunities to improve outcomes, minimize harms, and reduce healthcare waste.
OBJECTIVES

- Define High Value Care (HVC) and appreciate its importance
- Identify and understand the basic principles of HVC
- Recognize resources available to learn about HVC
- Apply principles of HVC to your patient care
Online HVC Cases
• Available on desktop, laptop, tablet, or smartphone
• Free online CME
• Approved by ABIM for 13 MOC medical knowledge points and patient safety credit
American College of Physicians
Five Things Physicians and Patients Should Question

1. Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.
   In asymptomatic individuals at low risk for coronary heart disease (10-year risk <10%) screening for coronary heart disease with exercise electrocardiography does not improve patient outcomes.

2. Don't obtain imaging studies in patients with non-specific low back pain.
   In patients with back pain that cannot be attributed to a specific disease or spinal abnormality following a history and physical examination (e.g., non-specific low back pain, imaging with plain radiography, computed tomography (CT) scan, or magnetic resonance imaging (MRI) does not improve patient outcomes.

3. In the evaluation of simple syncope and a normal neurological examination, don't obtain brain imaging studies (CT or MRI).
   In patients with witnessed syncope but with no suggestion of seizure and no report of other neurologic symptoms or signs, the likelihood of a central nervous system (CNS) cause of the event is extremely low and patient outcomes are not improved with brain imaging studies.

4. In patients with low pretest probability of venous thromboembolism (VTE), obtain a high-sensitive D-dimer measurement as the initial diagnostic test; don't obtain imaging studies as the initial diagnostic test.
   In patients with low pretest probability of VTE as defined by the Wells prediction rules, a negative high-sensitivity D-dimer measurement effectively excludes VTE and the need for further imaging studies.

5. Don't obtain preoperative chest radiography in the absence of a clinical suspicion for intrathoracic pathology.
   In the absence of cardiopulmonary symptoms, preoperative chest radiography rarely provides any meaningful changes in management or improved patient outcomes.

http://www.choosingwisely.org/
Don’t recommend daily home finger glucose testing in patients with Type 2 diabetes mellitus not using insulin.

Self-monitoring of blood glucose (SMBG) is an integral part of patient self-management in maintaining safe and target-driven glucose control in type 1 diabetes. However, there is no benefit to daily finger glucose testing in patients with type 2 diabetes mellitus who are not on insulin or medications associated with hypoglycemia, and there is negative economic impact and potential negative clinical impact of daily glucose testing. SMBG should be reserved for patients during the titration of their medication doses or during periods of changes in patients’ diet and exercise routines.

Don’t perform routine general health checks for asymptomatic adults.

Routine general health checks are office visits between a health professional and a patient exclusively for preventive counseling and screening tests. In contrast to office visits for acute illness, specific evidence-based preventive strategies, or chronic care management such as treatment of high blood pressure, regularly scheduled general health checks without a specific cause including the “health maintenance” annual visit, have not shown to be effective in reducing morbidity, mortality or hospitalization, while creating a potential for harm from unnecessary testing.

Don’t perform routine pre-operative testing before low-risk surgical procedures.

Pre-operative assessment is expected before all surgical procedures. This assessment includes an appropriately directed and sufficiently comprehensive history and physical examination, and, in some cases, properly includes laboratory and other testing to help direct management and assess surgical risk. However, pre-operative testing for low-risk surgical procedures (such as cataract extraction) results in unnecessary delays and adds to significant avoidable costs and should be eliminated.

Don’t recommend cancer screening in adults with life expectancy of less than 10 years.

Screening for cancer can be lifesaving in otherwise healthy at-risk patients. While screening tests lead to a mortality benefit, which emerges years after the test is performed, they expose patients to immediate potential harms. Patients with life expectancies of less than 10 years are unlikely to live long enough to derive the distant benefit from screening. However, these patients are in fact more likely to experience the harms since patients with limited life expectancy are more likely to be frail and more susceptible to complications of testing and treatments. Therefore, the balance of potential benefits and harms does not favor recommending cancer screening in patients with life expectancies of less than 10 years.

Don’t place, or leave in place, peripherally inserted central catheters for patient or provider convenience.

Peripherally inserted central catheters (or “PICCs”) are commonly used devices in contemporary medical practice that are associated with two costly and potentially lethal health care-acquired complications: central-line-associated bloodstream infection (CLABSI) and venous thromboembolism (VTE). Given the clinical and economic consequences of these complications, placement of PICCs should be limited to acceptable indications (long-term intravenous antibiotics, total parenteral nutrition, chemotherapy and frequent blood draws). PICCs should be promptly removed when acceptable indications for their use ends.

http://www.choosingwisely.org/
WHY DO RESIDENTS OVER-ORDER TESTS?

1. Duplicating role modeled behavior
2. Desire to be “complete”
3. Pre-emptive ordering/rushing an evaluation/unnecessary duplication of tests
4. Discomfort with diagnostic uncertainty
5. Curiosity
6. Lack of knowledge of the costs and harms
7. Defensive medicine
8. Patient requests
9. Faculty demand
10. No training in weighing benefit relative to cost and harm
11. Ease of access to services when patient is hospitalized

www.acponline.org/clinical-information/high-value-care
WHY DO PRACTICING PHYSICIANS OVERORDER TESTS?

1. Duplicating role modeled behavior
2. Desire to be “complete”
3. Pre-emptive ordering/rushing an evaluation/unnecessary duplication of tests
4. Discomfort with diagnostic uncertainty
5. Curiosity
6. Lack of knowledge of the costs and harms
7. Defensive medicine
8. Patient requests
9. Faculty demand
10. No training in weighing benefit relative to cost and harm
11. Ease of access to services when patient is hospitalized
MINDFULNESS

BE MINDFUL EVEN IF YOUR MIND IS FULL

- DELAVEGA
“BEING MINDFUL”
5 STEPS

Step 1

Did the patient have this test previously?

Think of 1-2 examples in which a test may be inappropriately repeated.
STEP 1 EXAMPLES

- Transfer from an outside hospital/clinic
  - Labs/imaging done just prior to transfer
    - Blood cultures, x-ray, CT, CBC, CMP, etc.

- Old records
  - TSH, A1C, anemia w/u, genetic testing

- ED admissions
  - AM labs ordered (0500) even when labs drawn in ED after midnight
“BEING MINDFUL”
5 STEPS

Step 2

Will the result of this test change the care of the patient?

Think of 1-2 examples in which a test result would not change the plan for the patient.
STEP 2 EXAMPLES

- Repeating procalcitonin daily
- Repeating CK/CKMB
- Frequency of electrolytes/H&H
- Ammonia levels
- Differential on a CBC
- H&H vs. CBC, BMP vs. CMP, K vs. BMP
"BEING MINDFUL"
5 STEPS

Step 3

What are the probability and potential adverse consequences of a false positive result?

Think of 1 example of test that has a high false positive rate and could inadvertently increase cost or suffering.
STEP 3 EXAMPLES

- D-dimer
- Troponin
- CHF peptide
- Mammography in a patient with another terminal disease
“BEING MINDFUL”
5 STEPS

Step 4

Is the patient in potential danger in the short term if I do not perform this test?

Think of 1 example of test that is frequently done in the inpatient setting that could be done in the outpatient setting.
STEP 4 EXAMPLES

- Stress echocardiography
- Fasting lipid panel
- A1C
Step 5

Am I ordering the test or treatment primarily because the patient wants it or to reassure the patient?
Think of 1-2 examples of tests or treatments that doctors might order to reassure a patient rather than for medical necessity.
STEP 5 EXAMPLES

- MRI for back pain
- Repeat CXR in patient’s diagnosed with Pneumonia (before 6-8 week repeat)
- Antibiotics for viral infections
WHAT IF MY PATIENT INSISTS?

The Three E’s

Empathize

Evaluate

Educate
OBJECTIVES

- Define High Value Cost-Conscious Care (HVCCC) and appreciate its importance
- Identify and understand the basic principles of and barriers to HVCCC
- Recognize resources available to learn about HVCCC
- Apply principles of HVCCC to your patient care
APPLY HVC PRINCIPLES TO PATIENT CARE: HOW DO WE GET THERE FROM HERE?

- **Step one:** Understand the benefits, harms, and relative costs of the interventions that you are considering.

  - Access HVC Resources, use mindfulness
People need to be reminded more often than they need to be instructed.

(Samuel Johnson)
**APPLY HVC PRINCIPLES TO PATIENT CARE: HOW DO WE GET THERE FROM HERE?**

- **Step two:** Decrease or eliminate the use of interventions that provide no benefits and/or may be harmful.

  - Mindfulness, health system measurement and reporting?

[www.acponline.org/clinical-information/high-value-care](http://www.acponline.org/clinical-information/high-value-care)
WHENEVER I’M ABOUT TO DO SOMETHING, I THINK “WOULD AN IDIOT DO THAT?” AND IF THEY WOULD I DO NOT DO THAT THING

-DWIGHT SCHRUTE
APPLY HVC PRINCIPLES TO PATIENT CARE: HOW DO WE GET THERE FROM HERE?

- **Step three**: Choose interventions and care settings that maximize benefits, minimize harms, and reduce costs (using comparative-effectiveness and cost-effectiveness data).

- Begins with mindfulness and willingness to change but augmented by decision support including decision rules

*It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.*

--Charles Darwin
APPLY HVC PRINCIPLES TO PATIENT CARE: HOW DO WE GET THERE FROM HERE?

- **Step four:** Customize a care plan with the patient that incorporates their values and addresses their concerns.
  - Addressing patient barriers

“Patient-centered discussions that include asking patients what they are concerned about, explaining your reasons, providing empathy, and providing a clear follow-up plan improve patient satisfaction more than doing unnecessary diagnostic testing because the patient requested it.”
APPLY HVC PRINCIPLES TO PATIENT CARE: HOW DO WE GET THERE FROM HERE?

**Step five:** Identify system level opportunities to improve outcomes, minimize harms, and reduce healthcare waste.

- Perhaps the greatest opportunity if organizational leadership is strong and the majority of individual physicians “buy in”
CASE #1: PREOP TESTING

A 67-year-old female with coronary artery disease, hypertension, chronic kidney disease stage 4, COPD, and type II DM presents for preoperative evaluation prior to a cataract surgery. She states she is able to mow her lawn and walk for several miles at a brisk pace without chest pain, chest pressure or shortness of breath. She has no other active complaints on review of systems.
CASE #1: PREOP TESTING

What preoperative testing is indicated?

1. None
2. CBC and BMP
3. CBC, BMP and EKG
4. CBC, BMP, EKG and chest x-ray
What preoperative testing is indicated?

1. None
2. CBC and BMP
3. CBC, BMP and EKG
4. CBC, BMP, EKG and chest x-ray
1. Don’t obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.

   In asymptomatic individuals at low risk for coronary heart disease (10-year risk <10%) screening for coronary heart disease with exercise electrocardiography does not improve patient outcomes.

2. Don’t obtain imaging studies in patients with non-specific low back pain.

   In patients with back pain that cannot be attributed to a specific disease or spinal abnormality following a history and physical examination (e.g., non-specific low back pain, imaging with plain radiography, computed tomography (CT) scan, or magnetic resonance imaging (MRI)) does not improve patient outcomes.

3. In the evaluation of simple syncope and a normal neurological examination, don’t obtain brain imaging studies (CT or MRI).

   In patients with witnessed syncope but with no suggestion of seizure and no report of other neurologic symptoms or signs, the likelihood of a central nervous system (CNS) cause of the event is extremely low and patient outcomes are not improved with brain imaging studies.

4. In patients with low pretest probability of venous thromboembolism (VTE), obtain a high-sensitive D-dimer measurement as the initial diagnostic test; don’t obtain imaging studies as the initial diagnostic test.

   In patients with low pretest probability of VTE as defined by the Wells prediction rules, a negative high-sensitivity D-dimer measurement effectively excludes VTE and the need for further imaging studies.

5. Don’t obtain preoperative chest radiography in the absence of a clinical suspicion for intrathoracic pathology.

   In the absence of cardiorespiratory symptoms, preoperative chest radiography rarely provides any meaningful changes in management or improved patient outcomes.

http://www.choosingwisely.org/
American College of Radiology
ACR Appropriateness Criteria®

Clinical Condition: Routine Chest Radiography

**Variant 1:** No clinical concern on basis of history or physical examination.

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ray chest routine preoperative</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine admission</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine outpatient</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

**Variant 2:** Suspicion of acute or potentially unstable chronic cardiopulmonary disease by history or physical examination.

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ray chest routine admission</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine preoperative</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine outpatient</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

**Variant 3:** Increased risk, patient- or procedure-related (ie, advanced age [particularly >70 years], unreliable history and physical examination, high-risk surgery).

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-ray chest routine preoperative</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine admission</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray chest routine outpatient</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

*Relative Radiation Level
“In the case of the preoperative chest radiograph, evidence suggests that increased management value may accompany advanced patient age and certain other patient- and procedure-related risk factors (eg, history of cardiopulmonary disease, unreliable history and physical examination, high-risk surgery); however, the ability of a preoperative chest radiograph to forecast postoperative pulmonary complications is low.”
“The decision to perform a chest radiograph in the preoperative...settings should principally derive from a need to investigate a clinical suspicion for acute or unstable chronic cardiopulmonary disease that could influence patient care.”
Five Things Physicians and Patients Should Question

1. Don’t recommend daily home finger glucose testing in patients with Type 2 diabetes mellitus not using insulin.
   Self-monitoring of blood glucose (SMBG) is an integral part of patient self-management in maintaining safe and target-driven glucose control in type 1 diabetes. However, there is no benefit to daily finger glucose testing in patients with type 2 diabetes mellitus who are not on insulin or medications associated with hypoglycemia, and there is negative economic impact and potential negative clinical impact of daily glucose testing. SMBG should be reserved for patients during the titration of their medication doses or during periods of changes in patients’ diet and exercise routines.

2. Don’t perform routine general health checks for asymptomatic adults.
   Routine general health checks are office visits between a health professional and a patient exclusively for preventive counseling and screening tests. In contrast to office visits for acute illness, specific evidence-based preventive strategies, or chronic care management such as treatment of high blood pressure, regularly scheduled general health checks without a specific cause including the “health maintenance” annual visit, have not shown to be effective in reducing morbidity, mortality or hospitalization, while creating a potential for harm from unnecessary testing.

3. Don’t perform routine pre-operative testing before low-risk surgical procedures.
   Pre-operative assessment is expected before all surgical procedures. This assessment includes an appropriately directed and sufficiently comprehensive history and physical examination, and, in some cases, properly includes laboratory and other testing to help direct management and assess surgical risk. However, pre-operative testing for low-risk surgical procedures (such as cataract extraction) results in unnecessary delays and adds to significant avoidable costs and should be eliminated.

4. Don’t recommend cancer screening in adults with life expectancy of less than 10 years.
   Screening for cancer can be lifesaving in otherwise healthy at-risk patients. While screening tests lead to a mortality benefit, which emerges years after the test is performed, they expose patients to immediate potential harms. Patients with life expectancies of less than 10 years are unlikely to live long enough to derive the distant benefit from screening. However, these patients are in fact more likely to experience the harms since patients with limited life expectancy are more likely to be frail and more susceptible to complications of testing and treatments. Therefore the balance of potential benefits and harms does not favor recommending cancer screening in patients with life expectancies of less than 10 years.

5. Don’t place, or leave in place, peripherally inserted central catheters for patient or provider convenience.
   Peripherally inserted central catheters (or “PICCs”) are commonly used devices in contemporary medical practice that are associated with two costly and potentially lethal health care-acquired complications: central-line associated bloodstream infection (CLABSI) and venous thromboembolism (VTE). Given the clinical and economic consequences of these complications, placement of PICCs should be limited to acceptable indications (long-term intravenous antibiotics, total parenteral nutrition, chemotherapy and frequent blood draws). PICCs should be promptly removed when acceptable indications for their use ends.

http://www.choosingwisely.org/
Methods

- Patterns of preoperative testing were examined.

Results

- 46,977 (63.8%) patients underwent testing
- After adjusting for patient and procedure characteristics, neither testing nor abnormal results were associated with postoperative complications.

Conclusions

- “Preoperative testing is overused in patients undergoing low-risk, ambulatory surgery.”
COCHRANE SYSTEMATIC REVIEW, 2012

- Three randomized clinical trials included results for 21,531 cataract surgeries.
- 707 total medical adverse events reported (3.3%)
  - 353 occurred in the preoperative testing group
  - 354 occurred in the no testing group
- Testing did not reduce the risk of intraoperative or postoperative medical adverse events
- Estimated costs 2.55 times higher in those with preoperative medical testing
- No difference in surgery cancellation rates
Case #2

- Mr. M is a 75 year-old man with OA presenting with acute-on-chronic right hip pain. He slipped out of bed this morning and is now unable to bear weight on his right leg.
- Exam is notable only for moderate tenderness over the right hip.
- Hip and pelvis x-rays were negative for fracture.

Should he have further imaging? Which type?
Clinical Decision Support Tools

- American College of Radiology: Appropriateness Criteria

The ACR Appropriateness Criteria® (AC) are evidence-based guidelines to assist referring physicians and other providers in making the most appropriate imaging or treatment decision for a specific clinical condition. Employing these guidelines helps providers enhance quality of care and contribute to the most efficacious use of radiology. Learn More
ACR Appropriateness Criteria: Acute Hip Pain – Suspected Fracture

**Variant 2:** Middle-aged and elderly patients, Negative or indeterminate radiographs.

<table>
<thead>
<tr>
<th>Radiologic Procedure</th>
<th>Rating</th>
<th>Comments</th>
<th>RRL*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI pelvis and affected hip without contrast</td>
<td>9</td>
<td></td>
<td>O</td>
</tr>
</tbody>
</table>
| CT pelvis and hips without contrast               | 6      |                                                                          | ⬤留言板 |}
| MRI pelvis and affected hip without and with contrast | 4      | See statement regarding contrast in text under “Anticipated Exceptions.” | O    |
| Tc-99m bone scan hip                               | 4      | Consider using single-photon emission CT (SPECT) or SPECT/CT.            | ⬤留言板 |
| CT pelvis and hips with contrast                   | 1      |                                                                          | ⬤留言板 |
| CT pelvis and hips without and with contrast      | 1      |                                                                          | O    |
| US hip                                            | 1      |                                                                          | O    |

**Rating Scale:** 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate

*Relative Radiation Level*
Case #2: Follow Up

- CT pelvis was performed and was nondiagnostic.
- Pain persisted and he remained unable to bear weight.
- MRI was obtained and revealed a nondisplaced femoral fracture in the setting of severe osteoarthritis.
- Patient underwent nonemergent repair of the fracture.
Case #2: Approximate Charges

This hospitalization:
- Femur x-ray: $700
- Pelvis x-ray: $800
- CT hip/pelvis: $3000
- MRI hip: $4000
- 4 nights in the hospital: $12,000
- Femur fracture repair: $12,415

Downstream:
- Delay in therapy, leading to increased morbidity/mortality
- Radiation exposure
MRI in this case: High Cost ≠ Low Value

- Remember that High Cost ≠ Low Value and likewise Low Cost ≠ High Value.
- High-cost interventions may provide good value because they are highly beneficial (ICD for selected patients with heart failure and low EF, screening colonoscopy).
- Low-cost interventions may have little or no value if they provide little benefit or increase downstream costs (BNP measurement in patient with clear heart failure, annual Pap smears in an average-risk woman).
“Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed it’s the only thing that ever has.”

-Margaret Mead
"Harris, when I said 'any questions' I was using only a figure of speech."
References


ACP, ACP’s High-Value Cost-Conscious Care Curriculum. http://hvc.acponline.org/curriculum_list.html


Thomas Reuters. Where can $700 billion in waste be cut annually from the U.S Health Care system? October, 2009.


Adapted from Owens, D. Ann Intern Med. 2011;154:174-180

ABIM Foundation, Choosing Wisely Campaign. www.choosingwisely.org

Qaseem, A. Appropriate Use of Screening and Diagnostic Tests to Foster High-Value, Cost-Conscious Care. Ann Intern Med. 2012;156:147-149


Dine, et al. Less is More: Developing Your Faculty to Implement the High Value Cost-Conscious Care Curriculum. (video)


2008 ACR Appropriateness Criteria® for preoperative chest radiography guideline