

Does trying to achieve your goals feel like this?

ARE THEY NECESSARY



ROUTINE PREOPERATIVE TESTS

Introduction

- The more information, the better quality
- the use of preoperative tests became ingrained in clinical practice
- systematic evaluations of the clinical effectiveness and cost-effectiveness were often lacking.

Introduction

- mid 1980s, Kaplan and colleagues,
- retrospective review of 2000 patients
- underwent elective surgery
- 60% of these patients had laboratory tests ordered for no apparent reason,
- only 0.22% of the abnormal results influenced preoperative management.^[3]



Introduction

- Turnbull and colleagues reviewed
- 2570 patients undergoing elective surgery
- only 104 of 5003 tests were abnormal and significant
- 4 patients would have benefited from "routine" laboratory testing.^[4]



Introduction

- Narr and colleagues reviewed
- 1044 healthy patients who did not undergo any preoperative testing before their elective surgeries.^[6]
- These patients did not experience any significant perioperative morbidity or mortality.



Introduction

- 7549 tests of 1109 patients were reviewed.
[7]
- duplicated within 4 months before elective surgery
- only 13 (0.4%) repeated values were abnormal

Introduction

- for cataract surgery
- a systematic review of 3 randomized trials
- did not show any difference in the adverse events
- between those who were tested versus those who did not.^[1]

Complete blood cell (CBC) count

CBC count severe leukopenia is extremely low and rarely

CBC count thrombocytopenia in fewer than 1% of healthy elective surgery patients

CBC count preoperative hemoglobin testing if the history of underlying anemia or a significant blood loss during the operation

Electrolytes

- One systemic literature review reported that unsuspected electrolyte abnormality is 1.4% among healthy elective surgery patients.
- no study showed a relation between hypokalemia and perioperative morbidity and mortality
- Postoperative hyponatremia is common in certain types of surgeries
- electrolyte determination is not routinely recommended for elective surgery in healthy individuals

Creatinine

Creatinine elevated creatinine levels in asymptomatic patients from 0.2% to 2.4% and increases with age

Creatinine Approximately 9.8% of patients aged 46-60 years have elevated creatinine levels.^[16]

Creatinine recommended for the use of nephrotoxic medications, all patients older than 50 years

Blood sugar (blood glucose)

Blood sugar abnormal glucose in asymptomatic patients ranges from 1.8% to 5.5%.

Blood sugar routine measurement of glucose is not recommended in all cases.

Blood sugar Recommended: vascular surgery and coronary artery bypass grafting (CABG), diabetes

Liver enzymes

The frequency of SGOT and SGPT abnormalities

- estimated to be approximately 0.3%.

routine preoperative testing

- not recommended for healthy individuals.

Hemostasis

In the absence of a history of bleeding

abnormal hemostasis to be less than 1%.

PT, aPTT, and bleeding time
not recommended for routine preoperative .

Urinalysis (UA)

- One study that included 200 patients
- undergoing orthopedic procedures showed only 5 of 27 abnormal urine test results
- urine analysis should not be routinely done for asymptomatic patients.



Pregnancy testing

The American Society of Anesthesiologists recommends pregnancy testing for all women of child bearing age.^[27]

History alone may not be completely reliable to exclude pregnancy.

Electrocardiography (ECG)

- abnormal ECG among healthy elective surgery patients ranges from 14% to 53% and increases with age
- retrospective study of 23,036 patients, A higher incidence of cardiovascular death in patients with an abnormal ECG (1.8%) than in those with normal ECG results (0.3%);
- ECG is reasonable in patients undergoing a vascular surgery or intermediate-risk surgery



Chest radiography

A meta-analysis of
21 studies

14,390 routine CXR -
only 140 of 1444
abnormal results

only 14 affected
physicians' decisions
in managing their
patients

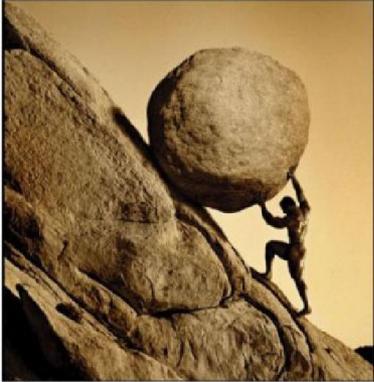
routine CXR is
recommended for
underlying heart or
lung disease.^[33, 34]

Summary

- Routine preoperative testing of **healthy people** undergoing elective surgery is not recommended.
- No laboratory test must be repeated if results were normal within **4 months** of the surgery without change in the patient's clinical status .
- require additional evaluation **depend on**: type of surgery, patient's age, medical comorbidities, drug therapies, specific group.

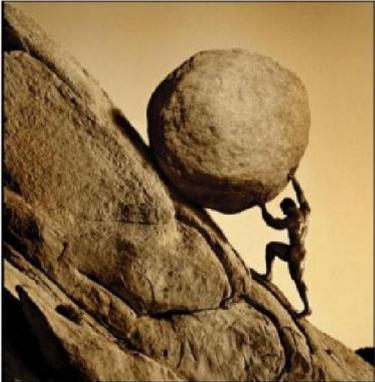
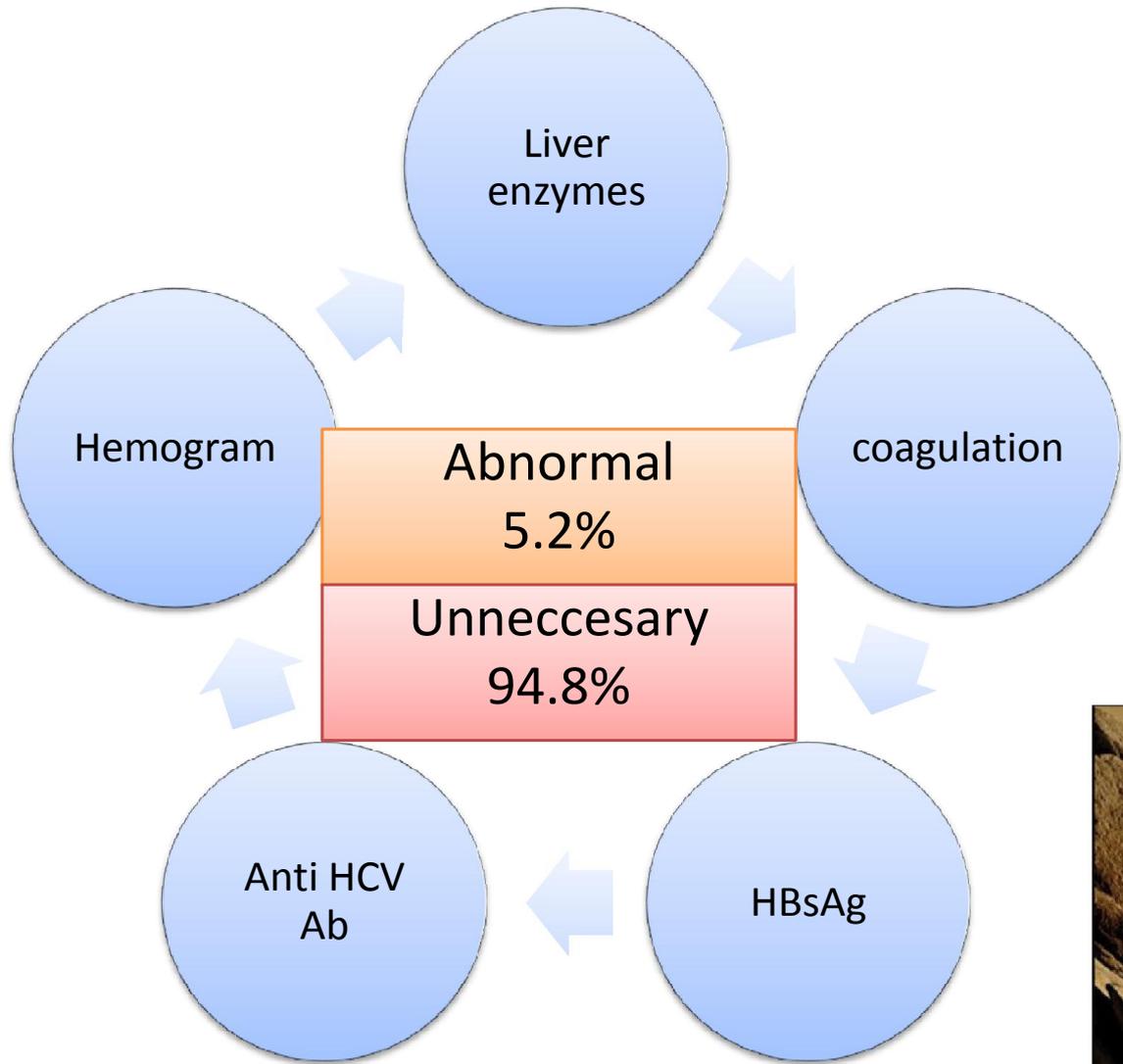
THANK
YOU





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3,693 patients
January 2005 and June 2009



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CRITERIA

Type of Surgery

Patient's Age,

Exercise Tolerance (E.T)

Medical Comorbidities

Drug Therapies

