

## Gist Statement or Abstract Problem Representation

When learning new information, people rely on 2 types of memory: verbatim and gist. *Verbatim representations* capture the literal facts or “surface form” of information, whereas *gist representation* capture its meaning or interpretation<sup>1,2</sup>.

### Why use gist representations?

Gist memories are more enduring over time and are more resistant to interference from distractions such as stress and emotion<sup>1</sup>. They decrease the cognitive and memory burden on the clinician. Gist representations are more likely to trigger a better differential and one that is very relevant to *this* patient (not a broad differential of abdominal pain, most of which is hardly likely to be causing *this* patient’s problem. The problem representation facilitates comparison with disease illness scripts.

Patterns are built on the basis of the transformation and abstraction of real clinical situations that lead to the representation of the disease in its most typical form<sup>3</sup>. In English, when a learner *works* to translate the history, PE, and labs, into a concise, abstract representation of the patient’s problem (Gist), s/he is much more likely to match it with the correct “illness script” (thus making the diagnosis), and is much more likely to remember this in the future which actually enhances their present illness scripts.

### Generating a Gist Statement

Some people *summarize* the H&P prior to writing their assessment. A summary is closer to the verbatim representation (a rehash of what you already wrote or presented in your history), but the Gist statement (*gist representation*) is more than that. We are changing the patient’s words into “doctor” words, and we are using many descriptors (adjectives or modifiers). For example, it is not sufficient to say, “The patient has abdominal pain” because it is not specific enough. I can’t problem solve “abdominal pain”. “RUQ abdominal pain” is better but still too broad. Use the answers you got from your history to really describe the abdominal pain but NOT in the patient’s words. For example if the patient’s history is:

40 year old 220 pound woman who presents with 4 hours of abdominal pain in the RUQ which is 8/10 on the pain scale. She has a temp of 102.4. PMH included 4 prior episodes of RUQ pain characterized by pain that would come and go and seemed to occur after eating French fries, hamburgers, or fried chicken. SH – she lives with her husband and 4 children and works as an accountant in a printing firm.

Then a translation of each word or phrase looks like this:

History	Translated to medical-ese
40 yo	Middle aged
220 pound	Obese
Woman	Female
4 hours	Acute
Abdominal pain in RUQ	RUQ abdominal pain
8/10 on pain scale	Severe
Temp 102	Moderate fever
Threw up once	Non-specific. Let's ignore
Not hungry	
4 prior episodes	Relapsing
RUQ pain that comes and goes	Colicky
After eating French fries, hamburgers, etc	Triggered by fatty food
Lives with husband	Not relevant. Let's ignore
4 children	Multigravida
Accountant in printing firm	Not relevant. Let's ignore (unless you think their may be a relevant exposure at work)

The Gist statement would look like this:

“Middle aged obese, Multigravida, female with prior history of relapsing RUQ, colicky abdominal pain triggered by fatty meals, now presents with acute, constant, moderate to severe RUQ abdominal pain with fever.

This paints a picture. It let's us know that this is someone who likely had cholelithiasis which now developed into acute cholecystitis. “It eliminates or de-emphasizes less relevant or non-specific symptoms. This information is not lost it is just not carried front and center.”(Lucey)

The Gist Statement is based on the key findings of the case so far. **The Gist should:**

1. Be a concise statement that accurately highlights the most pertinent features in a case without omitting *significant* points:

- Epidemiology (age, gender, risk factors)
- Key clinical features (symptoms, signs, labs, and imaging)
- Consider eliminating nonspecific terms
  - Malaise, fatigue, mild or transient diarrhea
- Eliminate redundant terms
  - Tachypnea and SOB

2. Transform specific details into medical terms (example: “jaundice” rather than “skin is yellow”. Heart rate is trickier. Some people like "tachycardia" rather than "heart rate of 150" however you should at least quantify the tachycardia, eg, “severe tachycardia” or Tachycardic to 150”).

3. Use qualifying adjectives and adverbs to better describe key findings AND it should paint a picture of the patient including how ill the patient is, for example:

- Location:
  - Diffuse vs focal
  - Monoarticular vs polyarticular
- Severity:
  - Mild vs severe
- Progression:
  - Acute vs chronic; or constant vs intermittent
- Etc.

Ultimately, a good Gist Statement should provide the basis for developing an appropriate differential diagnosis.

## References

1. Reyna VF. A theory of medical decision-making and health: fuzzy-trace theory. *Med Decis Making*. 2008;28(6):850-865.
2. Slotnick SD, Schacter DL. A sensory signature that distinguishes true from false memories. *Nat Neurosci*. 2004;7(6):664-672.
3. Nendaz, Bordage G, Clinical Reasoning: from research findings to applications for teaching. *Ped Med* 2005; 6: 235-54: