BIOMEDICAL WRITING

The Discussion
What does it mean?

1. **Answer the research question(s) asked in your Introduction**

    (Outline the principles and relationships indicated by your data, then highlight key results)

        (Question):
The lung serves an important nonrespiratory function by trapping and excreting venous air emboli. The site of trapping and the mechanism of excretion, however, are uncertain.

        (Answer):
By using in vivo videomicroscopy, we observed the trapping and excretion process of venous air emboli. The videorecordings showed that small air bubbles were trapped exclusively in pulmonary arterioles and were eliminated exclusively from that site. We think that the bulk of excretion is accounted for by molecular diffusion across the arteriolar spaces because the rate of elimination under perfused conditions was the same as the rate under nonperfusion.

        We have isolated a mutant CHO cell line that is unable to take up and metabolize exogenous hexadecanol...

        Our findings suggest that PCR amplification technology is more sensitive than conventional culture methods for the diagnosis of CMV.

        In this study we have demonstrated that air embolism leads to an increase in capillary permeability in the isolated lung, as evidenced by increases in lung weight, protein concentration of the alveolar fluid, and capillary filtration coefficient. These findings accord well with the results obtained in intact animals (1,11,17,18,23).

6. Point out any unexpected or inconsistent results, limitations of your study, or unsettled details

Worth noting is our inability to detect significant accumulation of fatty aldehyde in FAA.1 cells. This is not surprising when one considers the reactive nature of the aldehyde moiety...Such covalent modification of proteins by aldehydes has been demonstrated (31, 32).

There are several possibilities to explain our inability to detect CMV DNA in two seropositive, culture-negative individuals. One is that the PCR assay is not sensitive enough to detect the low levels of virus present in these persons. This possibility could, in theory, be resolved by increasing the number of amplification cycles. A second possibility is...
The detection of CMV DNA in one CMV seronegative donor is more difficult to explain. We are currently sequencing this amplification product to confirm its identity.

Our model does not consider other portions of the protein that....However, it is unlikely that such interactions are thermodynamically important because: (i)...

There are several limitations to these data. First, because almost half of the self-identified American Indians in Oregon in the 1990 census were not registered...,this study probably underestimated the extent of racial misclassification of American Indians in the Oregon registry. How these individuals differ from registered individuals and their actual rates of injury are unknown. In a recent study of racial misclassification (6)...
Second, American Indians represent only 1.4% of the Oregon population, and rates of racial misclassification on disease registries may be lower in states with a greater proportion of American Indian residents.

Special Cautions

-Keep the Discussion structure parallel to that of your Abstract, Introduction, and Results:

(Abstract)
Objectives--To describe the **characteristics of patients with do-not-resuscitate (DNR) orders** and the **frequency and timing** of these orders in a representative sample of intensive care units (ICUs) and to **compare practices from 1980 to 1990.**

(Discussion):
Patients who had DNR orders written while in the ICU were frequently elderly and in failing health prior to hospitalization. On admission to the ICU these patients had a high severity of illness and were most often admitted for...
Our findings indicate that over the last decade ICU **DNR orders have markedly increased in frequency (9% vs. 5.4%) and are written earlier...**
Do-not-resuscitate orders in this study (1988 to 1990) were also **associated with lower mortality rates and longer stays in the ICU than in the study from 1979 to 1982.**

-Don't repeat your introduction or rehash your results:

HCMV infections are widespread throughout the world. In developing countries, the seropositivity rate of HCMV in adults approaches 100%. Even in developed countries, it ranges from 40% to 60% (4). HCMV pneumonia is a fatal infection in immunocompromised patients, particularly when it occurs early after transplant. Approximately 40% of allogeneic bone marrow transplant recipients develop HCMV pneumonia, with a mortality of 80 to 90% (4,5). Moreover, HCMV infections are a major cause of morbidity and mortality in patients with AIDS (6,7)....

Check list for the discussion

A well composed and structured discussion should include the following:

CONTENT

- ☐ Outline of the principles and relationships indicated by your data

- ☐ Highlights of main results

- ☐ Answers to the questions posed in your introductions / aims / goals statement

- ☐ Clear statement(s) about
  what has been determined / demonstrated for the first time
  how your new data increases our understanding / has practical applications

- ☐ Comparison (similarities) and contrast (differences) of your results in comparison and
  contrast with that of previous studies.....

- ☐ Point out any unexpected or inconsistent results, limitations, unsettled details
  Including these is considered a strength, showing a critical, rigorous approach,
  not a sign of weakness!

- ☐ Suggest which studies can be done in future – be specific
  (not just "more studies on a and b are needed")

- ☐ Ensure the ending is strong – a terrific last paragraph is needed,
  do not decelerate to the finish line please!

PRESENTATION

- ☐ Wherever possible, keep structure parallel to that of the introduction and results

- ☐ Discussion is NOT a literature review, nor a repeat of the introduction or results!

- ☐ A strong discussion begins with iteration of your main findings,
  not a literature summary

- ☐ Correct terms are used according to the level of certainty
  suggest, imply, show, demonstrate, confirm

- ☐ Be sure to tell your story logically, and from the perspective of the reader!