Additional correlative data show that cell-bound radiogallium is likely to be responsible for elevated computer lung indices in rheumatoid lung. These data come from an additional rheumatoid lung case that we encountered, which had a ^{67}Ga computed lung index of only 110 when compared to the index of 308 in the published case. The open lung biopsy microscopic sections from this additional case exhibited much less chronic inflammatory infiltrate than that which occurred in the published case. As in the published case, neutrophils were almost nonexistent.

Our interpretation of our culture findings incorporates Dr. Weiner's original suggestion that LF contained in the cytoplasm of neutrophils is a major site for radiogallium accumulation (*3*). Radiogallium scintigraphy is usually performed at 48 hr, at which time one images the "repository" not the receptors. Our experiments were not designed as the minute-range, receptor-uptake type. They reflect in vivo clinical imaging because radiogallium was present with the cells during both of the entire incubation periods. Our experiments were patterned after the Australian researchers' earlier work, in which they specifically performed long-term rather than short-term incubations (*1,2*). In the Australian researchers' macrophage mutation paper (*5*), they returned to the use of short-term incubation receptor type work. Since the binding affinity of LF is greater than that of TF (*6*), the transfer of iron or gallium from TF to LF could be an intracellular phenomenon and does not necessarily need to involve LF receptors.

If extracellular LF due to bronchial hyperactivity was the cause of the excessive radiogallium uptake in our rheumatoid lung patient, then we should have seen a hilar and perihilar concentration of radiogallium in the scintigrams. This was not the case; the uptake was peripheral and homogenous. Furthermore, human studies have shown that radiogallium recovered from bronchoalveolar lavage is essentially all cell bound (*7*). Also, the results of challenge with aerosolized *E. coli* do not mimic the situation with regard to rheumatoid lung. We hope that the data and discussion provided herein will give the nuclear medicine community greater insight into the considerations necessary to understand gallium uptake.

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Ventilation-Perfusion Lung Scans

TO THE EDITOR: Pulmonary physiologists have traditionally used V as the symbol for a volume of gas and $\dot{V}$ as the symbol for gaseous flow rate. Similarly Q is the symbol for a volume of blood and $\dot{Q}$ is the symbol for blood flow rate. V/Q and $\dot{V}/\dot{Q}$ are ratios of these measurements (*1*).

Some years ago (*2*) the distribution of radioactivity in a ventilation-perfusion lung scan was abbreviated erroneously to V/Q despite the fact that neither blood volume nor blood flow was quantified. This abbreviation caught on and has persisted in many centers.

In the recent paper by Klingensmith and Holt (*3*), ventilation-perfusion lung scans are abbreviated to $\dot{V}/\dot{P}$, as if ventilation and perfusion were quantitated, while Gottschalk in his accompanying editorial (*4*) further compounds the error by using the symbols $\dot{V}/\dot{Q}$.

Until we actually measure ventilation ($\dot{V}$) and perfusion ($\dot{Q}$) why not call a lung scan what it is—a V-P scan?

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REPLY: Dr. Fishman raises some interesting and valid points. I remind him, however, that nuclear medicine is not only physiologically oriented, but, among other things, radiochemically oriented as well. Do we want the Mike Welch's of our world to think we speak of vanadium-phosphorus scanning? It may be that the "correct" application of jargon works better in a narrow specialty rather than a multidisciplinary area such as nuclear medicine, where much overlap exists and conventional slang may be more easily understood than precise application of terms. For instance, the xenon-133 study starts with a single breathhold which is proportional to flow rate and thus $\dot{V}$ could be used. The next step (equilibrium) is proportional to aerated lung volume (V), and the washout is dependent on the degree of collateral air drift; let's call it SW, for slow washout. So, why not call the ($\dot{V}$, V, SW) - P scan?

Personally, I prefer and use the term V/Q scanning *without* the dots above the letters. The dots appeared in the editorial process, which I assumed was *JNM* policy. I use V/Q from a long-standing bias, getting firmer as I grow older, that language is best used to communicate. As Dr. Fishman put it, V/Q is "the abbreviation that caught on." So far, when I use V/Q, people understand what I mean.

If semantic crusades are fought, and if V-P becomes the rallying point of the holy, and if the world's prestigious journals can be convinced that V-P is the only acceptable jargon, I guess I'll change to it from my comfortable old friend V/Q. But, I'm sure not going to be one of the first.

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Poor Technetium-99m-Dimercaptosuccinic Acid Renal Uptake and Tubulointerstitial Disease of the Kidney

TO THE EDITOR: Drs. Quinn and Elder report on a case of poor ^{99m}Tc-dimercaptosuccinic acid (DMSA) uptake in the kidneys with relatively normal creatinine clearance and histologic evidence of tubulointerstitial renal disease (*1*).

This case report reminds us of findings we have described earlier. In nine children with congenital proximal tubular dysfunction and nearly normal glomerular filtration rate (GFR), striking findings after ^{99m}Tc-DMSA administration were encountered: low kidney uptake, normal background activity and high urinary excretion (*2*). Furthermore, we described 20 patients with congenital or acquired tubular disorders. A high relative ^{99m}Tc-DMSA clearance (expressed as % of the simultaneously measured GFR) of 14%–35% was found (reference value 6%–13%) (*3*).

Our data support the statement of Drs. Quinn and Elder that the renal uptake of ^{99m}Tc-DMSA (and its urinary excretion) is an index of renal tubular function. Normally, ^{99m}Tc-DMSA uptake in the kidney is related to overall renal function; in tubulopathy, this is not the case.

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Strictures on Outpatient Nuclear Medicine Therapy

TO THE EDITOR: I read with aversion Goldsmith's comment on Herb Allen's latest joust with the Forces of Evil (*1*). Apparently Goldsmith and friends, Carol and Bertrand, are too young to have been exposed to the scourge of Edith Quimby and her 1949 Subcommittee on the human use of isotopes, (called by us good guys, the Subhuman committee.) These youngsters, having never lived under the Atomic Energy Commission (AEC) bureaucracy seem to consider the Nuclear Regulatory Commission (NRC) regulators as reasonable human beings which is false; they are vicious manipulators promoting radiation hysteria to feather their pockets.

Keep in mind, Herb Allen was treating patients with a mixture of radioisotopes euphemistically called ^{131}I back in the early 1950s. (It wasn't anywhere near pure ^{131}I until many years later.) He was the first to be able to earn his living practicing nuclear medicine, and he treated patients with California millicuries which were different from our Oak Ridge or Quimby's New York millicuries. Edith Quimby (Failla's gofer at Columbia) was one of the few radiation (medical type) physicists who could stomach the exploding bureaucracy of the new AEC that monopolized radioisotopes in the 1950s.

Madam Q had controlled the physics portion of radiology certification for many years. As a consultant to the new AEC, she tried to limit the use of ^{131}I and ^{32}P to those who had passed her radiology certification examination. A few of us, mainly Stanford radiologist Bob Newell, scotched this by pointing out that none of the inventors of ^{131}I and ^{32}P therapy, Seidlin, Chapman, Hamilton, Lawrence and Ogden, were radiologists. She dropped her demand but managed to require a radiologist on every hospital's Isotope Committee. She also won the battle to top off all outpatient therapy at the "*gamma emission equivalent* of 30 mc of ^{131}I." (No, Carol, it was not 30 mc of ^{131}I; Edith was usually arrogant, but never stupid.)

Thirty millicuries was then an enormous dose, (it was not *mCi* for another decade), probably lethal to most thyroids, but that's not why most of us objected to her limit. We used twice that limit of ^{198}Au, and I was using ten times that limit of ^{72}Ga; the limit was a "medical dose" which is the essence of the practice of medicine. A statutory reason for enduring the AEC bureaucracy involved radiation safety, but *never* did the AEC attempt to practice medicine. Thirty millicuries of ^{131}I in an uncontrolled body might, some then thought, be an unsafe source of radiation. (You still think so—gad! Go read some 1990 radiobiology statistics.) Within 20 years, nuclear medics put the profitable subspecialty of thyroid surgery out of business, partially because we made hospitalization unnecessary.

Goldsmith's wordprocessor also points out that the president of the upstart American College of Nuclear Physicians (ACNP—not to be confused with the venerable ACNM), and the immediate past-president of The Society of Nuclear Medicine, wanted to split a toothpick. I am also a past-president (though not so immediate) but I don't see why a *gamma equivalent of 30 mCi of* ^{131}*I* should be restricted to ^{131}I. It is an arbitrary unit of gamma radiation and applies to any radiation field with an 8-day decay period, which means only ^{131}I, which, in turn, means their comment was a tautology, the thinnest toothpick split possible.

Herb Allen's petition to the NRC, stripped of minor details, merely tells bureaucrats to get the hell out of the practice of medicine. As such, it should be overwhelmingly supported by every practicing physician. Foremost in support should be The Society of Nuclear Medicine, which, by insulting one of its earliest members, has apparently forgotten its reason for existence. I hope its political advisors develop diaper rash.

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