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What did we learn from the Saenger Experiments which were partially funded by DoD? The DoD intent was to obtain a biological assay that would easily and reliably give ionizing radiation dose. Such dose determinations could be readily used in a nuclear theater by a Commander for making tactical decisions affecting the conduct of unit's mission.

We learned:

1. No biological assay of body fluids (blood or urine) were developed that would readily yield the dose of ionizing radiation exposure of an individual. Individual physiological variations and other complicating causes (injury) also affected said assays. The hoped for assay would have given the field commander or the on scene incident director a tool by which to predict personnel performance in the face of extreme radiation exposure. Today, various forms of dosimetry suffice for these needs (Thermoluminescent dosimetry, etc).
2. Certain clinical techniques were developed or improved for the support of autologous transfusion (to obtain from the donor and reinfuse in that donor at a later date) or bone marrow transfusion. The Saenger group developed these modalities to permit much higher radiation doses than had been given, their aim was to achieve whole body doses of 600 rad. The transfusion work has been cited by nationally acknowledged experts in blood banking. Furthermore, basic work establishing the needed, quantified, transfusion of the blood element precursors was accomplished to assure successful and sufficient reinfusion. These advancements were of marked importance to tertiary hospital care, but were not of marked importance for developing tools for use by an on scene incident director or a field commander or a strategy team considering the effects of potentially lethal radiation fields.
3. Results of total and partial body irradiations reconfirmed findings of earlier and concurrent studies, namely, that partial body exposures did not cause the life threatening acute hematologic radiation sickness.
4. Though not stated in the DASA related matter, but was cited in other matter, the purpose of total body irradiation study at high dose levels was to determine if those very high levels of radiation exposure would be palliative or curative for any of the neoplasms in a broad class of cancers that were intractable to any other therapeutic measures. No such investigations at high radiation whole body exposures had been done. An apparently diligent effort was made to collect a cohort of patients which could be studied for the effects of radiation. Some benefit was achieved in several patients, however, a follow on study to determine its efficacy was not conducted. A risk of such high exposures was ablation of the red (blood producing) bone marrow, resulting in death, which apparently occurred in eight cases.