

**Interagency Working Group Pilot to Assess the Feasibility of
Developing and Maintaining an Inventory of Cancer-related Research
across the Federal Government**

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EXECUTIVE SUMMARY

Introduction

This report summarizes the findings and conclusions of a Federal Interagency Working Group whose task was to design and oversee a pilot study to evaluate the feasibility of developing and maintaining an inventory of cancer-related research activities across the federal government.

The pilot study was undertaken in response to a report submitted by the Subcommittee to Evaluate the National Cancer Program (SENCAP), a subcommittee of the National Cancer Advisory Board (NCAB) where it was recommended that there should be an evaluation of cancer research programs and priorities across the federal cancer research effort.

An ad hoc group was formed representing eleven federal agencies to begin the task of determining whether the maintenance of a federal cancer research inventory was feasible. Early on it was brought to the group's attention that such a database of all Federal research was under development by Critical Technologies Institute (CTI/RAND) for the US Office of Science and Technology Policy. The inventory, called RaDiUS (Research and Development in the United States), includes information about the research and development activities of 21 federal agencies. Based on a demonstration of RaDiUS and a site visit to CTI/RAND, the initial project goal was modified to assess the potential of RaDiUS to meet the needs of NCI and other Federal agencies conducting cancer research.

The assessment of RaDiUS involved both quantitative and qualitative components and the evaluation protocol was designed with input from working group and agency database administrators. The two goals of the evaluation were to:

- Evaluate the capability of RaDiUS to search for and identify a comprehensive set of relevant project records within specific cancer research areas (lung cancer, cancer and genetics and cancer and radiation), and;

- Evaluate the accuracy and completeness of data supplied by RaDiUS within the identified project records.

Findings

- RaDiUS is currently the most comprehensive database available that lists US federal R&D efforts, including cancer research.
- RaDiUS is a potentially useful tool in identifying cancer research across the federal government.
- RaDiUS was able to identify many agency cancer research projects in the 4 pilot agencies, but in some cases over reported, and in other cases under reported the numbers of projects among the pilot agencies.
- RaDiUS retrieves on full text. Many agencies retrieve based on coding or indexing terms. Therefore, RaDiUS by itself is not ideally suited for scientific reporting.
- The funding information contained in RaDiUS, while mostly accurate, contains some significant discrepancies.
- There was significant variation across agencies in the types of information and level of detail available through RaDiUS.
- There was significant variation across agencies on when updates occur, and update - dates in RaDiUS are not necessarily concurrent with updates at agencies.
- RaDiUS has the benefit of being accessible through the Internet and World Wide Web. It is relatively easy to use.

Recommendations

- RaDiUS could be used as a starting point for a comprehensive cancer-related research database; it presently contains information about basic and applied research projects (extramural only) for 21 Federal agencies.
- At the current time, if used alone, it is most suitable for qualitative purposes such as identifying collaboration opportunities and searching for research in newly developing areas or for research in related fields that might be relevant to cancer research.
- NCI should continue to determine reasons for underlying information discrepancies and determine what modifications can be made to the system to improve its utility.
- NCI should review upcoming enhancements to RaDiUS to determine whether they would provide additional utility or improved data quality.

1.0 BACKGROUND AND PROJECT GOALS

This report summarizes the findings and conclusions of a Federal Interagency Working Group pilot study to evaluate the feasibility and usefulness of developing and maintaining a comprehensive inventory of cancer-related research activities conducted and supported across federal agencies.

In 1993, the National Cancer Advisory Board (NCAB) established the Subcommittee to Evaluate the National Cancer Program to assess the achievements of the National Cancer Program, identify barriers to reducing the burden of cancer, and make recommendations for future research and program directions. The Subcommittee's recommendations appeared in the 1994 document *Cancer at a Crossroads: A Report to Congress for the Nation*. During their evaluation, the Subcommittee noted the need for better coordination of the National Cancer Program to minimize gaps and duplication in research efforts across federal agencies; they recommended a detailed evaluation of cancer research programs and priorities across federal agencies.

In response to the Subcommittee's recommendations, the National Cancer Institute (NCI) initiated a study of the feasibility of compiling an inventory of cancer-related research across federal agencies. At that time, the NCI had been unable to identify an existing database that contained comprehensive cancer research information across federal agencies; therefore, the anticipated scope of the project involved the development of a pilot cancer-related research database, as well as an assessment of the feasibility and usefulness of further developing such a database.

The NCI anticipated that the benefits of a comprehensive database of federally funded, cancer-related research would include improved utilization and coordination of resources in order to minimize gaps and duplication in research efforts across federal agencies, identification of opportunities for joint RFAs and collaborations; identification of promising areas of new and/or

expanded research; and improved response to Congress and constituents through access to comprehensive, coordinated, and accurate data.

Because the activities of the National Cancer Program go beyond the NCI to other Department of Health and Human Services components and federal agencies and departments that support cancer research, an Interagency Working Group to Evaluate a Pilot Inventory of Cancer-Related Research ("Working Group") representing 11 federal agencies and including ex officio members of the NCAB was established to advise NCI on the development of the pilot cancer-related research inventory. The Working Group was chaired by Dr. Barry Portnoy, Division of Cancer Prevention and Control, NCI.

1.1 Working Group Roles and Composition

The Working Group met on May 15, 1995, and again on June 22, 1995. The Working Group's responsibilities were as follows:

- Developing a definition of "cancer-related research"
- Developing a template of essential data elements for inclusion in the pilot database
- Providing information on existing and available data sources
- Assisting in collection and review of cancer research project data
- Designing an accessible database
- Reviewing a final report and recommendations.

The total time to conduct the pilot project was estimated at 6 months, beginning in May, 1995.

The following definition of "cancer-related research project" was proposed:

Cancer research encompasses a broad spectrum of activities, including research on basic biology, carcinogenesis, epidemiology, cancer detection and diagnosis, cancer prevention and control, cancer treatment, rehabilitation, surveillance and health services research, including health economics and health policy research.

After discussing the advantages and disadvantages of further broadening this definition (e.g., to include economic or health services research, outreach research incidental to service delivery, or communications/education projects) or alternatively, narrowing this definition, the Working Group agreed that a broad definition was best for this feasibility study because it would help identify possible data collection problems for a full-scale effort. It was also agreed that each agency representative responsible for providing data would have to use discretion regarding what information should be included under the rubric of "cancer-related research activities."

An initial survey was developed to profile the types of database systems containing cancer-related research information maintained by the agencies represented in the Working Group. The majority of agencies had some form of centralized database system from which cancer-related research information could be extracted, but it became apparent early in the project that the methods used by different agencies to collect, organize, and track information were widely divergent. There was no uniformity or consistency across agencies in terms of system hardware, system software, types of information stored, or updating procedures. Further, for those agencies that collect cancer-related research information, the types of data collected and database fields in which the data are represented could be markedly different. A summary of the agency profiles is provided in **Table 2**.

As a first step in defining the data elements that might be useful in an inventory of cancer-related research, the Working Group compiled a list of types of information that would be both useful and retrievable. These are listed in **Table 1** below:

Table 1-List of Potentially Important Data Elements

Agency	Principal Investigator
Division within Dept/Agency	Extramural/ Intramural
Mission of Agency	Mechanism of funding
Cancer site(s)	Institution
Project title	Project description
Funding Amount	Causative agent (if applicable)

Project Period	Targeted population
Agency contact name/phone	Type of research/activity
State/Country	Unique identifier
	Keywords

Ultimately, seven core data elements from this list were identified as critical to a cancer research inventory database:

- Grant Number (unique identification number)
- Project Title
- Principal Investigator
- Institution
- Project Period
- Funding Amount
- Project Description

The Working Group discussed whether cost data should be included in the inventory. Some members believed that it would be useful on to know what the Federal government spends on cancer research, but concern was voiced about the data's accuracy, sensitivity, and ease of access.

It was anticipated that the pilot inventory would draw data from existing databases and that four "pilot" agencies would be selected for data collection efforts-one NIH and one NCI subcomponent, one other PHS component agency, and one non-HHS agency involved in cancer research. Subsequent steps would include data analysis, production of sample reports, and development of a model for an interactive computer system to illustrate how agencies could use the information.

For purposes of this study, the Working Group recommended that four agencies provide data from their database-one NCI subcomponent, one other Institute of the National Institutes of

Health, one additional Public Health Service component agency, and one non-HHS agency involved in cancer research. Based on the agency profiles, the database systems of some agencies did not lend themselves to this pilot study. Other agencies, through their Working Group representative, declined to volunteer as one of the four organizations required to provide data for the pilot study. The four agencies selected for the pilot were

- National Institute on Aging (NIA) as the NIH subcomponent
- National Cancer Institute, in lieu of a subcomponent of NCI
- Centers for Disease Control and Prevention (CDC) as the PHS component
- Veterans' Administration (VA) as the non-HHS component

Table 2- Working Group Agency Database Profile

Agency	Database Platform & Software	Database Records	Number of Records	Database Uses	Updating
FDA	Macs and PCs; Filemaker Pro	Center for Biologics	--250 records total	I, 2, eventually 3	Annually
NIEHS	Mainframe; Oracle	Intramural and R&D contracts	-1000 records total -25% cancer-related	2, 3, 5	Annually
NIEHS	Conversion from PC; KnowledgeMan to Mini computer, Oracle	Extramural	-1000 records; 168 on cancer	I, 5	Never; updates are not online
NIOSH	No current database; one in development for PCs; unique software	Extramural contracts, intramural grants	Unknown	Will be used for I,2	Not yet decided
NIOSH	PC; WordPerfect secondary merge file	Extramural grants	105 active, 50 currently funded; 9 on cancer	I, 2, 3	Continuously
NCI	IBM Mainframe; VSAM	Extramural	-4,000 records, all cancer-related	2, 3, 5	Monthly

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Agency	Database Platform & Software	Database Records	Number of Records	Database Uses	Updating
DoD	No centralized database				
EPA	No centralized database				
VA	PC LAN; Microsoft SQL Server	All research	18,900 total; 3,900 on cancer	1, 2, 3	Daily
DOE	HP Mini computer; Fox Pro	Office of Energy Research/Office of Health and Environmental Research	-2000 total; 250-750 cancer-related (including genome)	4	Annually
CDC	Mainframe; ADABAS	Extramural grants	3,200 grantees; less than 20% cancer-related	2, 3, 5	At least quarterly (continually as needed)
DOL	No centralized database				
OSTP	No centralized database				

* Code for Database Uses:

- | | |
|--|---|
| 1 Internal administrative tracking | 4 Information resource for the scientific community |
| 2 Financial tracking; resource management | (World Wide Web access) |
| 3 Responding to Congressional/public inquiry | 5 Report writing on projects |

1.2 Project Goals (as modified)

At the second meeting of the Working Group, a representative of the Office of Science and Technology Policy (OSTP) informed the group of a database in development known as RaDiUS (Research and Development in the United States) that might provide a model for this project. The most comprehensive database on U.S. federal research and development programs, projects, and award outlays currently in existence, RaDiUS contains information about the research and development efforts (including cancer research) of 21 federal agencies. RaDiUS

was developed by Critical Technologies Institute (CTI)/Rand for OSTP primarily for budget purposes from data provided by several large-scale database systems, including the Federal Procurement Data System, Federal Assistance Awards Data System, Catalog of Federal Domestic Assistance, and MAX Budget Preparation System.

NCI, the VA, and contractor representatives were provided with a demonstration of the RaDiUS system on July 26 by CTI/Rand. Based on the demonstration, RaDiUS appeared capable of identifying not only funding levels for cancer-related research across federal agencies (extramural grants and contracts), but also project activities and particular areas of cancer-related research within a specific agency. The benefits of RaDiUS seemed to include the ability to respond rapidly and with minimal cost to external requests for specific data on cancer-related research; identify opportunities for collaboration among Federal agencies; identify possible duplication of effort among programs; aid strategic planning efforts; and aid internal management and budget oversight activities. (See Appendix A for background on the RaDiUS database.)

Based on this new information, the scope of this project was modified to develop a protocol for evaluating the comprehensiveness and accuracy of RaDiUS cancer-related research information relative to the four selected pilot agencies. A modified final report was to be developed with recommendations on the feasibility and usefulness of using the RaDiUS database system as a cancer-related research inventory.

2.0 PROJECT DESIGN

The evaluation of the RaDiUS data system involved two major components:

- A quantitative analysis comparing information obtained from RaDiUS to information from the four pilot agency databases
- A qualitative analysis performed by database administrators from the four agencies, contractor staff, and NCI to evaluate the ease of use of the system and the usefulness of the report formats

2.1 Quantitative Analysis Design

The quantitative analysis was designed with input from the Working Group and the database administrators of the four pilot agencies. The goals of the evaluation were to:

- Evaluate the capability of RaDiUS to search for and identify relevant project award records within specific cancer research areas
- Evaluate the accuracy and completeness of data supplied by RaDiUS within the identified project award record

To evaluate RaDiUS's ability to identify appropriate project awards within specific areas, a search for project awards was conducted and a data sample obtained from RaDiUS and each pilot agency based on three areas of research—lung cancer, cancer and genetics, and cancer and radiation. Similar search queries were developed for RaDiUS and each pilot agency based on the unique constructs of each agency's database system and using terms deemed appropriate to achieve a consistent and comprehensive data sample in these three areas. (Refer to **Appendix B** to review the specific search queries used.)

The search results from RaDiUS were then compared with the search results from the pilot agencies in each of these three research areas to evaluate the comprehensiveness and accuracy of the projects identified by RaDiUS compared with the projects identified by each agency.

To analyze the accuracy and completeness of the RaDiUS project record data elements, custom script queries were developed in Oracle that analyzed differences between data fields in RaDiUS and data fields in the pilot agency data set, including side-by-side display of unmatched items for manual evaluation. A subset of the "matching" project awards identified by both the individual agency data systems and the RaDiUS data system was then created and uploaded into an Oracle database for analysis and evaluation. (Because of the small number of cancer-related project awards in the CDC and NIA databases, all cancer-related project award records for these agencies were identified and used in the evaluation.) The evaluation consisted of

comparing the seven core data fields' among the records and summarizing the frequency of matching and non-matching data in each field, as well as determining at least some of the reasons for discrepancies.

A list of "unmatched" grant award numbers between RaDiUS and each pilot agency for each research area was also generated. Additional data were then requested from RaDiUS for those grant numbers that were identified by the agency but not by RaDiUS. These data were not received in time to be analyzed as part of this report; subsequent evaluation of these data may help interpret why some projects were identified by the agency and not by RaDiUS when similar search queries were performed.

NCI and contractor staff explored RaDiUS's ease of use and search capabilities. The contractor also worked with CTI/Rand to obtain the most current information on system changes designed to improve the usability of the system.

In order to obtain the perspective of other agency representatives regarding the usefulness of RaDiUS information, a survey was distributed to database administrators from the four agencies participating in the pilot study. The survey provided the database administrators with sample RaDiUS reports for research projects within their agency and asked them to evaluate the information for its usefulness and readability.

3.0 PROJECT RESULTS

3.1 Quantitative Analysis

3.1.1 Comparison of Project-Level Data

The results of this test for each of the four agencies are summarized below.

VA and RaDiUS. The use of a similar search query to search for project records in the areas

I To reiterate, these core data fields were Grant Number, Project Title, Principal Investigator, Institution, Project Period, Funding Amount, and Project Description. Since "Project Period" had to be analyzed as 2 separate fields-"start date" and "end date"-a total of eight fields were actually analyzed.

of lung cancer, cancer and genetics, and cancer and radiation yielded an average percentage of matching project record data of only 22 percent. In general, RaDiUS identified significantly more project records, based on similar search terms, than did the VA. This discrepancy may be explained by the fact that the VA database system can only search project records by Medical Subject Headings (MESH), whereas RaDiUS performs full-text searches. Specific results of the VA/RaDiUS comparison are described below.

Search Area	Commonly Identified Project Records	Additional Records ID by RaDiUS	Additional Records ID by VA
<i>Lung Cancer</i>	42	644	0
<i>Cancer and Genetics</i>	53	238	47
<i>Cancer and Radiation</i>	455	476	87

NCI and RaDiUS. The use of a similar search query to search for project records in the areas of lung cancer, cancer and genetics, and cancer and radiation yielded an average percentage of matching project record data of only 29 percent. Both the NCI data system and the RaDiUS data system have full-text search capability; however, when the NCI database system was searched, the search specialist used the system's "Special Interest Categories," rather than performing a full-text search. This may explain some of the discrepancy. Specific results of the NCI/RaDiUS comparison are described below.

Search Area	Commonly Identified Project Records	Additional Records ID by RaDiUS	Additional Records ID by NCI
<i>Lung Cancer</i>	105	241	67
<i>Cancer and Genetics</i>	535	1067	342
<i>Cancer and Radiation</i>	367	338	407

CDC and RaDiUS. Because RaDiUS is currently in the process of uploading data from CDC into its system, a full data set for CDC was not available for this portion of the evaluation. CDC data were obtained from CDC based on a text search of project titles on the term "cancer" and other cancer-related terms. A subset of data with unique identification (i.e., grant award) numbers was subsequently delivered to RaDiUS with a request to find matching data records, if possible, for the purpose of the second part of the quantitative evaluation, namely comparison of data fields. A total of 161 matching data records were provided by RaDiUS out of 163 records identified by CDC.

NIA and RaDiUS. The NIA data system contained only 35 cancer-related project records; therefore, it was assumed that a search of these records by project area would not yield significant results. However, a search in RaDiUS for "NIA" and "cancer" did identify matching unique project identification numbers for 31 records. Upon examination of the 35 NIA records, it was discovered that four were duplicates; therefore, a total of 31 individual project records were actually provided by NIA.

3.1.2 Comparison of Data Elements Within Project Records

This part of the quantitative evaluation looked at whether certain data elements within a project record "matched" (i.e., were they accurate and complete) between RaDiUS and each individual pilot agency. Many data fields did not "technically" or literally match in RaDiUS, as interpreted by the analytical computer program. This was due in many cases to differences in spaces between words, misspellings and/or alternate spellings, transposition of letters, truncated text, and added text. This finding raised a question about the source of RaDiUS data and whether they are manipulated after being received. However, if a data field in RaDiUS "substantively" matched the same data field in the pilot agency database, the data field was considered accurate and complete.

General observations about each data element analyzed in RaDiUS are summarized in **Table 3**. The specific results of the comparison of data elements for each pilot agency are also

summarized in several tables below.

Table 3- Observations on RaDiUS Data Elements	
<i>Data Element</i>	<i>Observations</i>
Grant No.	RaDiUS accurately matched grant numbers or other unique ID numbers (e.g. the VA uses an "accession" number to identify its projects). The full grant number including any prefix results in the best match.
Title	The title field in RaDiUS is truncated to 85 characters, resulting in cut off text in many instances. This makes it more difficult to determine at a glance the nature of a particular project based on title only. It may also affect title searches and/or full-text searching.
Principal Investigator	The PI field in RaDiUS is truncated to 30 characters, resulting in cut off text in some instances (i.e. degrees.)
Institute	RaDiUS contains many variations in the listing of institution names (e.g. University of Michigan, University of Michigan at Ann Arbor, U. of Michigan). RaDiUS also appears to use embedded coding for the names of institutions that appear repeatedly, which results in repeated errors if an error is present in the original coded name (e.g. Orange County is always listed as Orange County.) The wide variations in listing Institute names would make it difficult to accurately search for project awards by institution in this field.
Start Date	In RaDiUS, it appears the Start Date is tied to the start of fiscal yr funding or a budget period versus a project period, i.e. RaDiUS listed 10-01-93 as a start date for many projects.
End Date	In RaDiUS, the End Date is apparently tied to the end of fiscal year funding or a budget period versus a project period, i.e. RaDiUS listed 09-30-94 as end date for many projects.
Funding	RaDiUS rounds funding amounts to dollars expressed in nearest thousands. While much of the funding information in RaDiUS is accurate, rounding can lead to significant differences in total funding over a large portfolio.
Project Description	RaDiUS does not appear to update its database as often as some agency systems are updated. This was most apparent in abstract information which was outdated or listed in RaDiUS as Not Available, when the abstracts were available in the agency data sets. The issues of timeliness, availability and completeness are significant, and will affect text searching. Also, the abstracts/project descriptions in RaDiUS lose some spacing between words.

VA and RaDiUS. The results of a comparison of the accuracy and completeness of data elements between RaDiUS and the VA for three search areas-Lung Cancer, Cancer and Radiation, and Cancer and Genetics-are reflected in the following tables.

[NOTE: while the footnotes relate specifically to the first table, similar "Snatch" and "no match" characteristics of RaDiUS apply to all findings/tables.]

Agency-VA	Search Area - Lung Cancer		No. Of Common Records Compared - 42			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	42 ²	42 ³	42 ⁴	0	0 ⁶	41 ⁷
Do Not Match	0	0	0	42	42	1

Agency-VA	Search Area - Cancer & Radiation		No. Of Common Records Compared - 455			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	440	455	448	16	0	451
Do Not Match	15	0	7	439	455	4

Agency-VA	Search Area - Cancer & Genetics		No. Of Common Records Compared - 53			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	52	53	52	3	0	50
Do Not Match	1	0	1	50	53	3

2 The computer technically matched only 22 records due to a truncation of the title field in RaDiUS - the field is truncated to 85 characters. Reducing the VA title field to 85 characters resulted in matches for all 42 records.

3 The computer technically matched 0 records due to differences in spacing between names and titles. Once adjustments were made, all records matched. RaDiUS also truncates this field to 30 characters, resulting in mismatches. Reducing comparison data resolves these differences.

4 Three records did not technically match due to differences in listing the city/state and a typographical error in the RaDiUS data.

5 All starting dates in RaDiUS were either 10-01-92 or 10-01-93. This could be tied to the start of fiscal year funding vs start of the project.

6 All ending dates in RaDiUS were 09-01-94. This could be tied to the end of fiscal year funding. By matching on only month/year an insignificant number of additional matches were found.

7 RaDiUS maintains funding data rounded to the nearest thousand dollars. After the VA funding data was rounded to the nearest 1000, 41 records matched.

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NCI anti RaDiUS. The results of a comparison of the accuracy and completeness of data elements between RaDiUS and the NCI for three search areas are reflected in the following tables.

Agency-NCI	Search Area - Lung Cancer		No. Of Common Records Compared - 105			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	99	105	102	3	0	102
Do Not Match	6	0	3	102	105	3

Agency-NCI	Search Area - Cancer & Radiation		No. Of Common Records Compared - 367			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	367	364	357	15	0	363
Do Not Match	0	3	10	352	367	4

Agency-NCI	Search Area - Cancer & Genetics		No. Of Common Records Compared - 535			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	532	535	523	24	0 ⁸	531
Do Not Match	3	0	12	511	535	4

8 A comparison on month/year (instead of month/day/year) yielded 462 matches.

NIA and RaDiUS. The results of a comparison of the accuracy and completeness of data elements between RaDiUS and the NIA for the 31 identified cancer-related research records are summarized below.

Agency-NIA	Search Area - Cancer		No. Of Common Records Compared - 31			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	30	28	31	3	1	20
Do Not Match	1	3	0	28	30	11

CDC and RaDiUS. The results of a comparison of the accuracy and completeness of data elements between RaDiUS and the CDC for the 161 identified cancer-related research records are summarized below.

Agency-CDC	Search Area - Cancer		No. Of Common Records Compared - 161			
	<i>Title</i>	<i>PI</i>	<i>Institute</i>	<i>Start Date</i>	<i>End Date</i>	<i>Funding</i>
Match	161	Not Avail in RaDiUS	161	22	2	format not comparable
Do Not Match	0	Not Avail in RaDiUS	0	139	159	format not comparable

3.2 Qualitative Analysis

Two NCI representatives and one contractor representative also evaluated RaDiUS in terms of several qualitative factors: (1) general ease of use (e.g., maneuver between screens, understand commands and prompts); (2) conducting searches and extracting needed information, (3) clarity of reports; and (4) potential usefulness.

3.2.1 General Ease of Use

Overall, the database is easy for a computer novice to search and proceeds through the various stages of performing a search in a logical manner. The mechanics of performing a search are fairly simple: A point-and-click interface enables the user to set and modify search parameters. A "home page" allows the user to access tables that provide an overview of federal funding for research and development activities by agency, information on how RaDiUS was created, or a glossary of budget terms. On-line search help is also available. (See RaDiUS Data Entry Screen in Appendix A.)

3.2.2 Conducting searches and extracting needed information.

While RaDiUS is user-friendly and allows easy maneuvering, as described above, it is more difficult for the novice user to develop search strategies to accurately and comprehensively access the full scope of desired information. In general, several steps are necessary to perform a search using RaDiUS. First, the search parameters (or query criteria) must be defined, as prompted on the screen. This includes selection of *fiscal year*, *federal organization* supporting the funding of the research, *search terms*, and *performer* (*i.e.*, the awardee of a grant or contract).

Fiscal year is defined as a government fiscal year from October 1 to September 30. If no specific fiscal year is selected, RaDiUS currently defaults to the most recent year of full fiscal data. While full fiscal data may not be available in more recent years, other project information will still be available for those years.

Federal organization is the name of the organization funding a particular research project. There are several ways to select a federal organization for a search query. It can be chosen - from a prompt for a hierarchical listing of all agencies and their subordinate entities. If the user does not choose a federal organization or organizations, then, by default, all federal agencies and their subordinate entities are included in the search. (In the future, rather than having this occur by default, a prompt will be added for the user to proactively select all federal organizations.)

Search terms refers to the actual subject matter of a search query. RaDiUS is designed to perform full-text searches. RaDiUS also has Boolean search capabilities and can conduct a "smart search" using wildcards, truncation, and searches of proximity, which allow the user to choose two words and then set the number of words that can maximally appear between them in order for them to fulfill the criteria (e.g., a proximity search can be used to select all occurrences of "control" and "prevention" within 2 words of each other). (A sample RaDiUS Query Screen is illustrated in Appendix A.) A limitation in the search capability of RaDiUS is that a search on the singular form of a term does not automatically search on the plural form of that term; the failure to pluralize key terms may result in differences in search results.

Performer refers to the actual organization or institution awarded project funding. A listing of all performers in RaDiUS is provided in a glossary that can be browsed by the user. However, this listing is quite extensive and contains numerous variations in referencing a performer (e.g., "Johns Hopkins University" and "JHU"). Users can also select a performer by location or type. If no performer is designated, RaDiUS will include information for all performers by default. (In the future, rather than having this occur by default, a prompt will be added for the user to proactively select all performers.)

Because of the current variation in listing performers, as well as the fact that many agencies do not provide data for performers, it may not be useful to designate any information in the search query for this criteria unless users are interested in only projects undertaken by one performer, have a general idea of the number and types of projects that they expect to see, and can accurately select all variations in the listing of that performer.

A search query that a user wants to save or modify at a later time can be saved by choosing the "save query" button on the toolbar and naming the query. The query can then be retrieved under that name at any future date, until it is erased.

3.2.3 Viewing and printing reports.

Search results can be viewed in several formats: "Outline" presents an overview of all records

found, from which more detailed information can be obtained; "Award/Task Summary" presents a brief description of each record found; and "Award/Task Detail" presents more detailed information on each record that was found, including project dates, location, expenditures, performer, type of performer, title, keywords, award unique identification number, award type, award number, and abstract. **Appendix C** illustrates the formats used for these reports.

A potential concern is the time required to retrieve and print reports. For example, if a user wishes to print several award/task detail reports, each report must be retrieved and printed separately—they cannot be printed out as a group. This process of retrieving, browsing, and printing at the award/task level requires a great deal of time to complete.

Another limitation is that the user cannot currently customize reports; only the above-described formats are available. For example, if a user wanted to view only one or two specific fields across many records, there is presently no method for doing so. The user must view each record in its entirety to obtain information in his or her data field of interest.

3.2.4 Potential Usefulness of RaDiUS

A qualitative evaluation of the potential usefulness of RaDiUS, including an evaluation of the usefulness of keyword descriptors, reporting/record formats, and the type of information provided by RaDiUS, was conducted by NCI and contractor representatives, as well as selected database administrators from the four agencies participating in the pilot study.

Usefulness of keyword descriptors. RaDiUS provides keywords within each project record in the database. Currently, these keywords are taken directly from existing data supplied by each agency participating in the RaDiUS database. They are presented at the end of the project record.

In general, the keywords included in the RaDiUS records were considered adequate and/or useful for distinguishing *cancer-related* information by the VA, CDC, NIA, and NCI, although NCI noted that while the keywords would be adequate for many searches, they would not be adequate for all search queries. Keywords in RaDiUS may differ from keywords in agency

databases (for example, NCI's GENIUS system).

Usefulness of reporting/ record formats. The database administrators reported that the data fields presented in the records flowed in a logical manner; it was readily apparent which projects were being referred to; and none of the data fields were superfluous. Several agencies recommended adding additional data fields such as the name of the investigator performing the research (Principal Investigator) and the status of a project (active or final).

NCI and contractor staff found the report for the summary by organization difficult to read. No line spacing is used to separate individual project listings; no styles (bold or underline) are incorporated to highlight individual data fields; and some data fields (both the heading and corresponding information) are presented in all upper case letters, while others are in upper/lower case. The readability of this report format could be enhanced through the use of bold text or other forms of highlighting, as well as the use of line spacing.

Usefulness of the type of information provided by RaDiUS. The RaDiUS database provides detailed project information at the award/task level for 12 different data fields. Those containing federal organization information include Agency, Bureau, Program, and Project; those containing individual award/task information include Award I.D., Award Number, Estimated Start/End Dates, Performer, Place of Performance, Funding, Title, and Long [Project] Description. The quantitative analysis of the accuracy and comprehensiveness of RaDiUS data for seven data fields (as compared with data submitted by the pilot agencies) is described above. Obviously, both accuracy and comprehensiveness influence the usefulness of information. However, the database administrators from the four pilot agencies also evaluated hard copies of RaDiUS records and provided their opinions on the usefulness of the RaDiUS" record information.

NCI stated that the records provided useful descriptions at the project level. The CDC and VA concluded that RaDiUS did not provide adequate information on their agency's research projects. CDC commented that there is no project description and that the project start/end dates are incorrect. [Note: CDC data is currently being uploaded into RaDiUS and this may

account for lack of and discrepant information.] The VA noted that the Project Title on several report formats was truncated-titles can be up to 142 characters in length in the VA database and RaDiUS does not appear to capture all characters.

On the project description level, the CDC commented that project abstracts were not available on RaDiUS for its data. (This is probably because CDC does not currently include abstracts in its database and RaDiUS uses only existing, available data-it does not add to or modify the data.) The VA commented that the "Performer" data field contained in the project descriptions was not always accurate (e.g., "VA Medical Center" was incorrectly referred to as the "Rehabilitation R&D Center").

Budget information, at least for FY 94, was judged to be accurate, but while the CDC concluded that budget information was presented in a useful and easy to understand manner, the VA, NIA, and NCI expressed several concerns. First, overall aggregate budget information was not found to be very useful. Second, the figures represented for FY 95 and FY 96 were questioned, since normally FY expenditures can only be tied to specific projects following the end of a fiscal year. NIA noted that RaDiUS is more limited than its system in that it does not carry budget information for intramural projects. Furthermore, it appears that RaDiUS aggregates any supplemental budget information into the total cost of a grant. Lastly, the NCI noted that presenting budget information as "Federal" versus "Non-Federal" is not adequate for its purposes since some projects are co-funded by multiple institutes of NIH or by N -I and another government agency.

When asked whether they would be likely to use RaDiUS if it were available to them, most database administrators answered "No." They said that they could obtain more information through their own agency database system. However, some suggested that RaDiUS might be useful to others within their agency for reviewing similar projects in other agencies, to find out what other agencies are doing, or to develop collaborative opportunities.

4.0 DISCUSSION

The initial goals of this project were to determine the feasibility and usefulness of developing and maintaining a comprehensive inventory of cancer-related research activities conducted and supported across federal agencies. Midway through the project, the Working Group discovered a database that could potentially meet the needs of the National Cancer Program, and the remainder of the project was devoted to evaluating that database in terms of the Program's needs.

Feasibility. One thing this project highlighted was the difficulty of developing a database that can effectively capture all cancer-related research the government supports. As previously noted, differences in the type of databases used by the agencies, the types and format of the information captured, and the update cycle make it nearly impossible to create a database that is completely accurate, all of the time.

However, the 22% and 29% match rates reported by the VA and NCI, respectively, seem quite low. Again, these discrepancies may be explainable by the fact that, while RaDiUS was searched using full-text search, the VA and NCI databases were not. However, the reasons for the discrepancies still need to be further explored.

The accuracy and completeness of several RaDiUS fields, most notably funding, Project Description, and Project Period, were also called into question during the project. These fields should be further examined.

Usefulness. As stated previously, the anticipated benefits of a comprehensive database of federally-supported cancer research include improved utilization and coordination of resources, identification of opportunities for joint RFAs and collaborations, identification of promising areas of new and/or expanded research, and improved response to Congress and constituents through access to comprehensive, coordinated, and accurate data.

RaDiUS may be useful in *improving utilization and coordination of resources* if funding data

can be made more accurate and end users trained in search techniques to accurately identify desired project or other data. One limitation in RaDiUS is the lack of consistency in identifying Institutes and Performers, making it very difficult to search a particular Institute or Performer for the purpose of coordinating resources, or collaborating on projects. Another limitation is the lack of Project Period information, making it difficult to coordinate utilization of resources.

RaDiUS may be useful for *identifying opportunities for joint RFAs and collaborations* if end users are thoroughly trained in search techniques to accurately identify desired project research areas. While useful information regarding ongoing project work and activities of other Agencies can be identified from browsing RaDiUS, without sophisticated search strategies, opportunities for collaborations could be easily overlooked.

RaDiUS may be useful for *identifying promising areas of new and/or expanded research*, particularly because of the breadth of information it contains. Again, training in how to perform sophisticated, directed searches will improve its usefulness in this area.

It is not clear that RaDiUS will be useful in *improving responses to Congress and constituents*. The type of information most requested by Congress is funding information and funding data in RaDiUS is not yet comprehensive or accurate. Other requests include areas of special interest (e.g., minority populations, breast cancer, clinical trials) and it is not clear that RaDiUS can accurately and comprehensively supply this type of information.

4.1 Recommendations

- *If* a comprehensive cancer-related research inventory is to be established and maintained, RaDiUS should be used as a beginning point; it already contains basic and applied cancer research information from 21 federal agencies in a sophisticated, user-friendly relational database system that has many capabilities for future growth.
- Continue to investigate RaDiUS to determine how cancer-related research information is collected and how it is manipulated after it is received, in order to access what further

improvements can be made to the accuracy of the data provided by the system.

- Investigate how RaDiUS information is updated and how often as compared to agency data in order to improve availability on RaDiUS of most current data.
- Further evaluate the search capabilities of RaDiUS and its ability to identify comprehensive, relevant information in specific areas, particularly compared to similar information derived from individual agencies.
- Improve RaDiUS' search techniques and instructions. To extract relevant, comprehensive information from a database it is critical that the user be knowledgeable in techniques of database searching. Small changes in input may result in large changes in output. Better methods for controlling these differences need to be developed.
- Investigate inaccuracies in data fields and methods for correcting errors, particularly differences in funding amounts.

ACKNOWLEDGMENTS

Special acknowledgment is extended to Ms. Anne Middleswarth and Ms. Sherri de Coronado of NCI and to the staff of NOVA Research Company for their efforts in facilitating the planning and conduct of this study.

Appreciation is also extended to Ms. Donna Fossum of CTI/Rand, for her time and cooperation in demonstrating RaDiUS and supplying key data information for use in this study, and to the data representatives from the four pilot agencies—Ms. Linda Zimmerman (Veterans' Administration), Ms. Barbara Kellner (National Institute on Aging), Mr. Lee Entrekin (Centers for Disease Control and Prevention) and Ms. Marilyn Gaston (National Cancer Institute), for their time and cooperation in supplying key data information for their respective agencies.

This project was supported in part by 1% set-aside evaluation funds.

APPENDIX A

BACKGROUND ON RaDiUS

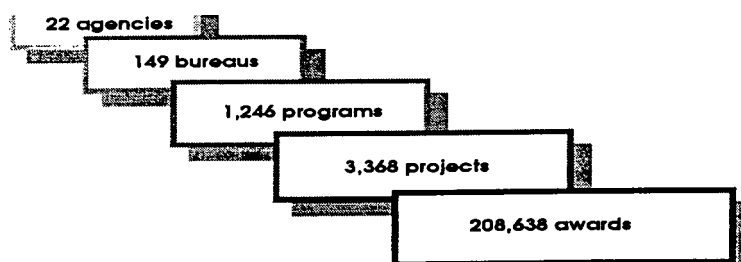
RaDiUS: The Database of Federal R&D Activities and Spending

The federal government will spend almost \$71 billion in fiscal year 1996 on the conduct of R&D. Managing this vast enterprise effectively is vital, both for achieving national goals and for ensuring that such a large investment is wisely spent. Yet, until now, federal policymakers have lacked a basic tool : the ability to see how much the federal government is spending on each area of science and technology. Do our investments match our priorities?

To date, the only information available to address these questions have been incomplete and out of date. Historically, data on federal R&D were compiled retrospectively using traditional survey techniques, yielding information that was often two to three years old at the time of its release. To complicate matters, agencies often did not follow a standard format in reporting R&D information. The result was a fragmented and partial picture of federal R&D.

To address this problem, the Critical Technologies Institute (CTI) at RAND has constructed the first comprehensive, real-time accounting of federal R&D activities and spending. CTI identified the various existing federal data sources that contained information on R&D; developed an organizational framework that allowed merging these data into a common, relational data system; and then created an easily searchable online database containing detailed information on federal R&D spending and substantive activities.

This database, called "RaDiUS" (for "Research and Development in the United States"), allows users to track federal R&D activity from cabinet- and agency-level budgets down to the program, project, and award levels, where budget categories translate into actual R&D work performed for FYs 1993 through 1996.



RaDiUS allows users to see the total R&D investment by all federal agencies, to compare the level of R&D investment in specific areas of science and technology across all federal agencies, or to examine the details of specific research investments within a specific agency.

R&D Budget Authority for the Federal Government (in millions) (R&D Conduct ONLY)	FY 1993 (actual)	FY1994 (actual)	FY1995 (est.)	FYI 996 (est.)
Agency -- Department of Energy	5,827	5,943	5,795	6,138
Bureau -- General Science & Research Activities	640	675	700	708
Program -- High Energy Physics	477	464	475	495
Project-- Physics Research	144	145	140	147
Award Task -- Linear Collider Research	33	33	na	na

The beta version of the database has been made available to the Office of Science and Technology Policy (OSTP) and to other parts of the federal government. CTI researchers have begun using the database to analyze federal R&D expenditures and programs in support of OSTP and the National Science and Technology Council. When completed, RaDiUS will be accessible to designated users via the Internet through the World Wide Web.

For more information on RaDiUS, contact Tim Webb or Donna Fossum at CTI, 2100 M St. NW Washington DC 20037, (202) 296-5000.

ENERGY RESEARCH

panel Turns Up Heat on Fusion With Flat Funding Plan

A presidential panel of scientists is urging the U.S. government to scale back its fusion program drastically, abandoning plans for major budget increases and revamping both national and international efforts to create sustained thermonuclear reactions. The group hopes that the blueprint, laid out in a sumo u, y of a draft report that was obtained by *Science*, will satisfy budget-cutters while allowing some progress toward the goal of harnessing the sun's energy source. But even that looks wildly optimistic given the spending proposals now before Congress.

The report was written by a nine-member panel chaired by John Holdren, an energy professor at the University of California, Berkeley, and is scheduled to be presented next month to the President's Committee of Advisors on Science and Technology. Convened in February, the Holdren panel has cobbled together a plan that would limit annual funding indefinitely to about \$45 million below the current \$366 million. That level of spending would mean delaying or canceling the proposed \$742 million Tokamak Physics Experiment (TPX) at Princeton Plasma Physics Laboratory, designed to demonstrate continuous use of a tokamak. It would also require scaling back the \$10 billion International Thermonuclear Experimental Reactor (ITER), a joint project of the United States, Europe, Japan, and Russia designed to show the feasibility of fusion as a commercial power source.

The steady-state funding the panel envisions is a far cry from the Department of Energy's (DOE's) current plan to more than double the fusion budget by 2001, forge ahead on both TPX and ITER, and maintain research aimed at building a demonstration fusion power reactor by 2025. DOE's plan is "reasonable and desirable" but unrealistic, the panel concluded. While the panel's less expensive alternative "entails considerable pain," it "maintains a modicum of momentum toward the goal of practical fusion energy."

Despite that pain, DOE officials appear ready to listen. Martha Krebs, DOE assistant secretary for energy research, said this week that the Holdren recommendations "are really very interesting and imaginative."

Under the plan, almost half of the \$320 million a year would support the core technology program and operate existing tokamaks. Inertial-confinement fusion, led by Lawrence Livermore National Laboratory, would receive "modest funding." The rest of DOE's fusion budget would pay for

engineering work on ITER and three more years of operating the Tokamak Fusion Test Reactor (TFTR) at Princeton, now slated to be shut down on 1 October.

Although this reprieve would allow TFTR scientists to continue gathering data, the blueprint leaves little room for TPX, which was supposed to be TFTR's successor. Princeton lab director Ron Davidson says the report is "very positive and sensible," but that his lab would fight to keep a design team intact that could build TPX when the time is right.

The news is not much better for ITER managers. The Holdren panel says the U.S. contribution to ITER should be limited to \$1.2 billion and that other partners could be brought in eventually to defray costs. And it argues that the multinational project as a whole should be scaled back by more than



A kind cut. Holdren report trims fusion budget to save it.

half, to a \$4 billion physics project that focuses on igniting and burning plasmas for shorter periods than now planned. The schedule to start operations by late in the next decade also would slip 3 years.

However grim this picture may seem to fusion advocates, Congress is considering an even darker scenario. Last week a House appropriations panel slashed the president's \$366 million request for fusion to \$229 million—roughly the same level approved by the House Science Committee's energy and environment subcommittee, which authorizes DOE's research programs.

Krebs is betting that the Senate will fight to reverse that cut. If not, warns the Holdren panel, a budget of that level "would leave room for nothing beyond the core program of theory and medium-scale experiments ... [with] little sense of progress toward a fusion energy goal." Although Holdren's team concludes such cuts would be "too high a price to pay for the budgetary savings involved," it may turn out to be what Congress is selling.

—Andrew Lawler

R&D BUDGET

New Database Tracks Federal Projects

Two years ago, a chance conversation between research managers at the U.S. Geological Survey and the Department of Agriculture led to an agreement for cooperative research on the prediction of regional water flow and quality. Both agencies had been working independently on the topic, but the agreement has allowed them to achieve the same objectives, for less money, by teaming up. This month the White House is taking the wraps off a database that could lead to more such agreements by letting federal research administrators find out about one another's projects at the touch of a finger.

"It's the ease of access that's nifty," says one federal administrator who has used it. "You can get information without bothering people, and you can find out things that will encourage cooperation and avoid redundant research."

The database, called RADIUS (Research and Development in the United States), contains detailed information on the government's entire R&D budget since 1993, spanning 21 agencies and including descriptions of 185,000 individual awards. "It's the most comprehensive R&D database in the world," says Lionel (Skip) Johns, associate director for technology at the White House Office of Science and Technology Policy (OSTP). "And at \$70 billion [in annual spending], it's also the largest."

RADIUS was created to help coordinate R&D spending—one of the goals of the new National Science and Technology Council. The system was developed by the Critical Technologies Institute, a federally funded think tank operated by the Rand Corp. for OSTP. Access is currently restricted to government officials working on interagency projects, but there are plans to make the database accessible on the Internet once questions involving proprietary information are resolved.

Those who have seen RADIUS in action report it's a powerful tool to learn what the rest of the government—including their own agency—is doing on any conceivable topic. "Right now it's hit-or-miss," says Bob Batcher of the Arms Control and Disarmament Agency, who monitors a range of activities relating to nonproliferation. "With RADIUS I can query everything the government is doing. The only trouble is that it's like drinking from a fire hose."

The private sector would also like to take a sip. "For a company that's thinking of pursuing a particular technology, knowing whether it already exists and who's working on it is very valuable," says Jim Babcock, an independent consultant on software technology from Austin, Texas. "Nothing like this has ever existed before."

—Jeffrey Mervis

RaDiUS Data Entry Screen

Main Query	Save Current Query	Glossary of Terms	Search:, :Strategies,	Fed:R&D Overviews	Welcome Screen	Show Query Criteria
Submit Query	Clear Query	Edit Query	Restore Saved Query			

For instructions on how to query **RaDiUS**, see [how to use RaDiUS](#).

Specify Query Criteria

- [Specify a Fiscal Year](#)
- Specify Federal Organizations
 - [Browse a hierarchical list of Federal Organizations](#)
 - [Find a Federal Organization by name](#)
 - Select Federal Organizations by ...
 - ... [NSTC Committee Interest Areas](#)
 - a ... [Budget Functions and Sub-Functions](#)
 - ... [Congressional Appropriation Bill Funding R&D Activities](#)
 - ... [DOD Budget Activities](#)

Specify Search Terms

- [Specify a search term](#)
 - [Specify a simple search term](#), optionally using wildcards and/or truncation
 - a [Specify a proximity search](#)
 - [Specify a term using soundex](#)
- [Browse list of all substantive words in RaDiUS text fields to make selection](#)
- [Preview the results of a truncation or advanced term search](#)
- [Browse teens of generic thesaurus related to Science and Technology](#)
- [Edit existing search terms](#)

Specify performers

- [Browse and select performers of R&D with awards in RaDiUS](#)
- [Browse and select intramural performers](#)
- Other criteria for selecting performer
 - [Select Performer by Geographic Location](#)
 - a [Select Performer by Performer Type](#)

Federal Interagency Working Group
to Conduct a Pilot Inventory of Cancer-related Research Activities

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APPENDIX B

RaDiUS EVALUATION PROTOCOL

NOVA Research Company

4600 East-West Highway, Suite 700
Bethesda, Maryland 20814

Telephone (301) 986-1891
fax (301) 986-4931

MEMORANDUM

October 9, 1995

TO: Pilot Agency Database Contacts

FROM: Dana Young, Task Leader

SUBJECT: Evaluation Protocol

Enclosed is the final evaluation protocol for comparing cancer-related research data from RaDiUS and Pilot Agencies, as discussed at our meeting on September 18. As part of this evaluation, we are asking you to complete the questionnaire that is included with the protocol, to provide qualitative information on aspects of the RaDiUS data system.

Please take the time to thoroughly review the questionnaire and answer all questions as completely and accurately as possible. If you would like to confer with the working group representative from your agency, please feel free to do so. In addition, please feel free to contact me directly with any questions (301-656-1749).

We appreciate all of your assistance and cooperation on this project. In order to complete the final report, we are asking each of you to return your evaluations to NOVA, at the address below, no later than October 17, 1995. Again, thank you for your help.

Please send completed questionnaires to:

NOVA Research Company
4600 East-West Highway, Suite 700
Bethesda, MD 20814
ATTN: Dana Young

You may also fax them to my attention at (301) 951-7249.

cc: Dr. Barry Portnoy, NCI
/Ms. Anne Middleswarth, NCI (w/ enclosures)

Protocol for Comparing Cancer-Related Research Data from RaDiUS and Pilot Agencies

There are two major parts to our evaluation of the RaDiUS¹ (Research and Development in the United States) data system:

- A quantitative analysis comparing information obtained from RaDiUS and from individual agency databases is being performed using Oracle, a relational database management system.
- Qualitative aspects of the RaDiUS data system will be evaluated using your answers to the attached questionnaire and our experience using RaDiUS.

Quantitative Analysis (performed by contractor)

A sample of data will be obtained from each agency based on 3 areas of research-lung cancer, cancer and genetics, and cancer and radiation. Each agency will document their search methodology, detailing all search constructs and terms used to achieve the data sample and the amount of time required to obtain the data sample.

- A search will be performed on RaDiUS for the same 3 research areas. The search methodology will be documented, including all search constructs and terms used to achieve the data sample and the amount of time required to obtain the data sample.
- Based on these searches, a comparison will be performed to evaluate the comprehensiveness and accuracy of the RaDiUS project-level data compared to the agency project-level data.
- A sample subset of no more than 300 records for each agency will then be identified. Additional searches will be performed on RaDiUS using the Unique Identification Number (UIN) assigned to each project to identify matching records that are part of the agency subset data, but not located during the first search using RaDiUS. The number of additional records from each agency obtained from RaDiUS using the UIN will be documented separately from the initial RaDiUS search.
- Oracle will then be used to electronically evaluate the comparability of seven data fields between all "matched" records and to summarize frequency information on matching and non-matching data.
- If time permits, determinations of the reasons for discrepancies at both the project- and field-level will be made.

¹ RaDiUS is the current most comprehensive database of Federal Research and Development (R & D) activities and spending. The database allows a user to follow R & D allotments from the cabinet and agency level down to program, project, and award levels; facilitates comparison of cross-agency investments in certain research areas; and permits examination of an agency's investment into specific areas of concern.

Qualitative Analysis (performed by pilot agencies)

Please respond to the following questions as fully as possible using the hardcopy of RaDiUS - data that is attached. The RaDiUS data are presented in three varying formats marked "A," "B," and "C." These alphabetical letters may be used to distinguish specific comments you may have about a particular record format.

I. Subject Information

In general, how do the keywords included in the RaDiUS records (where available) compare with the keywords available in your agency's database system? Are they the same or different? How do they differ?

Are the keywords included in the RaDiUS records adequate and/or useful to you and your agency for distinguishing cancer-related research information?

II. RaDiUS Record Format

Think about how the information is organized within each record and respond to the following questions.

Do the data fields flow in a logical manner? Yes No

Comments:

Is it readily apparent which project is being referred to? Yes No

Comments:

Would you delete any data fields? Yes No

If Yes, which fields?

Would you add any fields (including keywords)? Yes No

If Yes, which fields?

III. RaDiUS Record Content and Usefulness

Does RaDiUS provide adequate information on your agency's research projects?

 Yes No

Comments:

Do the records provide useful descriptions at the project level?

 Yes No

Comments:

Is the budget information presented in a useful and/or easy to understand manner?

 Yes No

Comments:

Is the budget information accurate?

 Yes No

Comments:

Based on your review of a limited number of RaDiUS records, if this type of database information were readily available to you would you use it?

Yes No

If Yes, how often? For what purposes? If No, please explain.

Would others in your agency find it useful?

Yes No

If Yes, for what purposes? If No, please explain.

IV. Agency Database Information

Please supply the following information regarding your agency's database system used for the pilot evaluation.

Does the database include all grants and contracts for the agency? If not, please describe its comprehensiveness.

Does the database include all divisions, centers, or other organizational subgroups within your agency? If not, please describe its comprehensiveness.

Does the database include your agency's intramural research and development projects? If not, please identify the database responsible for tracking this information.

Does your agency use more than one database system to track the research you support?

V. Expansion/Enhancement Plans/Schedules for Agency Database

Please comment on any known plans for expansion or enhancement of your agency's database(s) to include more information (e.g., will be adding grant abstracts), change project information formats, include a broader scope of information (e.g., add project-level intramural research information) and any available schedule(s) for implementation.

VI. Outsider Access to Agency Database

This section refers to the availability/accessibility of your agency's database (the one you are using for this comparative evaluation) to other Federal research planning/program officials to permit similar gathering of research information.

Is the agency database available to all staff within your agency?

Yes No

If No, to whom is it available?

Is the agency database available to Federal employees outside of the agency?

Yes No

Is the agency database available to non-Federal researchers/others (e.g., extramural grantees)?

Yes No

If the database is available to non-Federal personnel, is the full set of information available?

Yes No

If No-What information is excluded?

Is the agency database available through the Internet?

Yes No

If you answered "yes" to the preceding question, is it available:

- Through Gopher Through World Wide Web

Please provide any other pertinent information concerning the availability and/or accessibility of information on research projects that your agency supports/conducts.

VII. Additional Comments:

Please use this space for recording any other comments on RaDiUS.

Thank you for your assistance. Your responses will help us to determine the feasibility of using RaDiUS to serve as a cancer-related research inventory for all Federal Agencies.

RaDiUS Search Queries

Radiation: all four pilot agencies

((('cancer') or (carcinoma') or ('neoplasm')) and (('radiation') or ('radiotherapy') or ('ultraviolet') or ('isotope') or ('radon') or ('x-ray') or ('gamma ray') or ('proton beam') or ('infrared') or ('laser') or ('microwave') or ('radioisotope') or ('synchrotron') or ('electromagnetic') or ('positron emission tomography') or ('radio waves') or ('magnetic resonance imaging'))

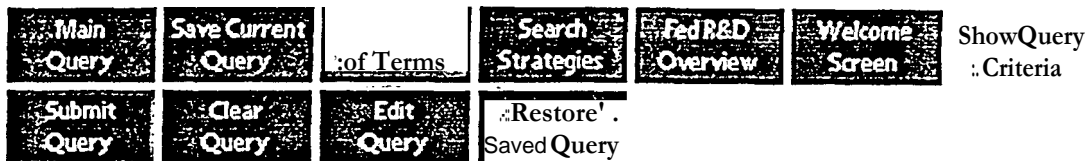
Genetics: all four pilot agencies

((('cancer') or (carcinoma') or ('neoplasm')) and (('genetics') or ('genetic disease') or ('gene') or ('oncogene') or ('tumor suppressor gene') or ('susceptibility gene') or ('familial') or ('hereditary') or ('mutation') or ('chromosome') or ('gene therapy'))

APPENDIX C

SAMPLE RaDiUS REPORT SCREENS

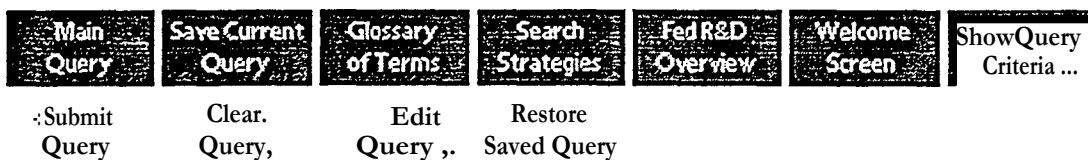
The RaDiUS Query Screen



For instructions on how to query RaDiUS, see [how to use RaDiUS](#).

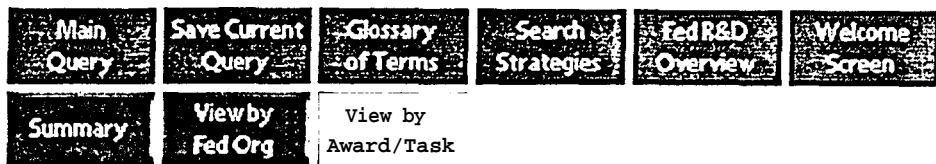
Specify Query Criteria

- Specify [a Fiscal Year](#)
- Specify Federal Organizations
 - [Browse a hierarchical list of Federal Organizations](#)
 - [Find a Federal Organization by name](#)
 - Select Federal Organizations by ...
 - a ... [NSTC Committee Interest Areas](#)
 - a ... [Budget Functions and Sub-Functions](#)
 - ... [Congressional Appropriation Bill Funding R&D Activities](#)
 - ... [DOD Budget Activities](#)
- Specify Search Terms
 - Specify a search term
 - [Specify a simple search term](#), optionally using wildcards and/or truncation
 - [Specify a proximity search](#).
 - [Specify a term using soundex](#).
 - [Browse list of all substantive words in RaDiUS text fields to make selection](#)
 - [Preview the results of a truncation or advanced term search](#)
 - [Browse terms of generic thesaurus related to Science and Technology](#)
 - [Edit existing search terms](#)
- Specify performers
 - [Browse and select performers of R&D with awards in RaDiUS](#)
 - [Browse and select intramural performers](#)
 - Other criteria for selecting performer
 - a [Select Performer by Geographic Location](#)
 - a [Select Performer by Performer Type](#),



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Federal Organizations Active in Specified Area



ShowQuery:
: Criteria

Query Specifications

Fiscal Year: 1994

Federal Organization:

Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or

Department of Health and Human Services / National Institutes of Health / National Institute on Aging or

Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for Occupational Safety & Health

Search term or phrase: ('testicular cancer')

Performer(s):

Overview of Query Results

Note: Budget authority and expenditures are reported in thousands of dollars. A terse outline of all involved federal organizations is also available.

Agency: Department of Health and Human Services

Total BA (94, 95, 96): 911,040,024K; 911,411,662K; 911,648,682K

BA for Related Bureaus (94, 95, 96): 910,337,997K; 910,698,079K; 911,126,145K

BA for Related Programs (94, 95, 96): 92,020,719K; 92,086,828K; 92,175,338K

BA for Related Projects (94, 95, 96): \$541,502K; \$530,655K; 9551,174K

5 related awards/tasks, with outlays/obligations of 91,944.0K.

Bureau: . National Institutes of Health

Total BA (94, 95, 96): 910,337,997K; 910,698,079K; 911,126,145K

BA for Related Programs (94, 95, 96): 92,020,719K; 92,086,828K; 92,175,338K

BA for Related Projects (94, 95, 96): 9541,502K; 9530,655K; 9551,174K

5 related awards/tasks, with outlays/obligations of 91,944.0K.

Program: National Cancer Institute

Total BA (94, 95, 96): 52,020,719K; 92,086,828K; 92,175,338K

BA for Related Projects (94, 95, 96): \$541,502K; 9530,655K; \$551,174K

5 related awards/tasks, with outlays/obligations of 91,944.0K.

Project: Cancer treatment [extramural, intramural, and training]

Total BA (94, 95, 96): 9541,502K; 9530,655K; 9551,174K

5 related awards/tasks, with outlays/obligations of 91,944.0K.

Agency: Department of Veterans Affairs

Total BA (94, 95, 96): 9264,846K; 9264,912K; 9270,554K

BA for Related Bureaus (94, 95, 96): 9252,000K; 9251,743K; \$257,000K

BA for Related Programs (94, 95, 96): na; na; na

BA for Related Projects (94, 95, 96): na; na; na

21 related awards/tasks, with outlays/obligations of 952.9K.

Bureau: . Medical & Prosthetic Research

Total BA (94, 95, 96): 9252,000K; 9251,743K; \$257,000K

BA for Related Programs (94, 95, 96): na; na; na

BA for Related Projects (94, 95, 96): na; na; na

21 related awards/tasks, with outlays/obligations of \$52.9K.

Program: Rehabilitation R&D Ctr - (Baltimore MD)

Total BA (94, 95, 96): na; na; na

BA for Related Projects (94, 95, 96): na; na; na

3 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Birmingham)

Total BA (94, 95, 96): na; na; na

BA for Related Projects (94, 95, 96): na; na; na
2 related awards/tasks, with outlays/obligations of \$1.9K.

Program: Rehabilitation R&D Ctr - (Chicagcn/T,akAsidz, TT)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
2-related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Crr - (Dallas, TX)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.3K.

Program: Rehabilitation R&D Ctr - (Denver, CO)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
2 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (East Orange, NJ)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Hines, IL)
Total BA (94, 95, 96): rya; na; na
BA for related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Indianapolis, IN)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Iowa City, IA)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$48.7K.

Program: Rehabilitation R&D Ctr - (Nashville, TN)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (New Orleans, LA)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Palo Alto, CA)
Total BA (94, 95, 96): na; na; na
BA for related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Richmond, VA)
Total BA (94, 95, 96): na; na; na
BA for Related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (San Antonio, TX)
Total BA (94, 95, 96): na; na; na
BA for related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of 92.1K.

Program: Rehabilitation R&D Ctr - (Tucson, AZ)
Total BA (94, 95, 96): na; na; na
BA for related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of \$0.0K.

Program: Rehabilitation R&D Ctr - (Washington, DC)
Total BA (94, 95, 96): na; na; na
BA for related Projects (94, 95, 96): na; na; na
1 related awards/tasks, with outlays/obligations of 90.0K.

A terse outline of all involved federal organizations is also available.

Main Query	Save Current	Glossary	Search Strategies	Fed R&D Overview	Welcome Screen	ShowQuery Criteria
Summary..	Viewby Fed Org	View by Award/Task				

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Award/Task Summary

Main Query	Save Current Query	Glossary of Terms	Search Strategies	Fed R&D Overview	Welcome Screen	Show Query Criteria
Summary	View by FedOrg	View by Award/Task				

Query Conditions

Fiscal Year: 1994

Federal Organization:

Department of Veterans Affairs or
Department of Health and Human Services / National Institutes of Health / National Cancer Institute or
Department of Health and Human Services / National Institutes of Health / National Institute on Aging or
Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for Occupational Safety & Health

Search term or phrase: ('testicular cancer')

Performer(s):

Summary

Note: Budget authority and expenditures are reported in thousands of dollars.

Project: [Department of Health and Human Services / National Institutes of Health / National Cancer Institute / Cancer treatment \(extramural, intramural, and training\)](#)

Hit [1 of 26](#) -- awd #: [U10CA49957](#) -- Project Grant

Dates: Apr 1992 to Mar 1995 -- Loc: NASHVILLE, TN

1994 Expenditures (total, federal): \$114.5K; \$114.5K

Performer: VANDERBILT UNIVERSITY HOSPITAL, CHILDREN'S RE

TITLE: ONCOLOGY:: LONG DESCR: The primary objective of this proposal is to secure funding to help support clinical cancer research at Vanderbilt University. From October, 1977 until June, 1986, clinical research was partly supported by f

Project: [Department of Health and Human Services / National Institutes of Health / National Cancer Institute / Cancer treatment \(extramural, intramural, and training\)](#)

Hit [2 of 26](#) -- awd #: [U 10CA26806](#) -- Project Grant

Dates: Apr 1992 to Mar 1995 -- Loc: WASHINGTON, DC

1994 Expenditures (total, federal): \$90.7K; \$90.7K

Performer: WALTER REED ARMY MEDICAL CENTER

TITLE: CANCER AND LEUKEMIA GROUP B:: SHORT DESCR: TO DEVELOP MEANS TO CURE AS MANY CANCER PATIENTS AS POSSIBLE:: LONG DESCR: The purpose of our research is the investigation of multimodal treatment and cancer biology in adult patients wi

Project: [Department of Health and Human Services / National Institutes of Health / National Cancer Institute / Cancer treatment \(extramural, intramural, and training\)](#)

Hit [3 of 26](#) -- awd #: [P01 CA38493](#) -- Project Grant

Dates: May 1992 to Mar 1995 -- Loc: BOSTON, MA

1994 Expenditures (total, federal): \$1,239.8K; \$1,239.8K

Performer: DANA-FARBER CANCER INSTITUTE

TITLE: SOLID TUMOR AUTOLOGOUS MARROW PROGRAM:: SHORT DESCR: TO DEVELOP MEANS TO CURE AS MANY CANCER PATIENTS AS POSSIBLE:: LONG DESCR: The overall objective of the Solid Tumor Autologous Marrow Program (STAMP) is to integrate basic and c

Project: [Department of Health and Human Services / National Institutes of Health / National Cancer Institute / Cancer treatment \(extramural, intramural, and training\)](#)

Hit [4 of 26](#) -- awd #: [R35CA39844](#) -- Project Grant

Dates: Sep 1992 to Apr 1995 - Loc: BLOOMINGTON, IN

1994 Expenditures (total, federal): \$469.9K; \$469.9K

Performer: INDIANA UNIVERSITY, BLOOMINGTON

TITLE: CLINICAL TRIALS IN ONCOLOGY:: LONG DESCR: Dr. Lawrence H. Einhorn will continue his studies in Clinical Cancer Research through the Outstanding Investigator Grant. Pivotal studies will continue to be done in patients with testicle

Project: [Department of Health and Human Services / National Institutes of Health / National Cancer Institute / Cancer treatment \(extramural, intramural, and training\)](#)

Hit [5 of 26](#) -- awd #: [U10CA16395](#) -- Project Grant

Dates: Apr 1992 to Jun 1994 -- Loc: NEW YORK, NY

1994 Expenditures (total, federal): \$29.1 K; \$29.1 K

Award/Task Detail



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ShowQuery
Criteria

Summary

Viewby
Fed Org

Viewby
Award/Task

Next action

- [Return to Query Summary page](#)
- [View results by Award/Task](#)
- [View results by Federal Organization](#)
- [Next award/task](#)
- [Previous award/task](#)

Query Conditions

Fiscal year: 1994

Federal Organization: Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or

Department of Health and Human Services / National Institutes of Health / National Institute on Aging or

Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for

Occupational Safety & Health

Search term or phrase: ('testicular cancer') ([Skip to first occurrence](#))

Performer(s):

Award/Task Information -- #1 of 26

Parent Federal organizations

Agency [Department of Health and Human Services](#)

Bureau [National Institutes of Health](#)

Program [National Cancer Institute](#)

Project [Cancer treatment. \(extramural, intramural, and training\)](#)

Award/Task Detail

Note: Budget authority and expenditures are reported in thousands of dollars

Award id: 20007054919

Award number: U10CA49957 Award type: Project Grant

Estimated start/end dates: Apr 1992 to Mar 1995

Performer: VANDERBILT UNIVERSITY HOSPITAL, CHILDREN'S RE Other Nonprofit

NASHVILLE, TN

Place of Performance: Nashville TN

Funding:

Total for all years: na

Average Annual Funding: \$118.3K

1994 actual Funding: Federal amount = \$114.5K; Non-Federal amount = \$0.0K

Award/Task Abstract

TITLE: ONCOLOGY:: LONG DESCR: The primary objective of this proposal is to secure funding to help support clinical Cancer research at Vanderbilt University. From October, 1977 until June, 1986, clinical research was partly supported by funds obtained through the Southeastern Cancer Study Group. With the disbanding of the SECSG, Vanderbilt investigators sought and obtained membership in the Eastern Cooperative Oncology Group. Membership in ECOG came at the end of a funding cycle and only limited "start-up" funds have been made available to assist in this transition. The specific aims of this proposal include: 1) to increase participation in group-wide phase II and phase III clinical trials, 2) to develop innovative treatment protocols for lung cancer, testicular cancer, lymphomas and other malignancies, 3) participation in and

development of pharmacology studies to be used in conjunction with ongoing ECOG trials, 4) collaboration in ongoing group-wide bone marrow transplantation studies and development of new studies, 5) and to maintain the high quality of data management as previously established during our long association with SECSG. These goals will be obtained through the close cooperation of investigators from the divisions of medical oncology and hematology and the assistance of investigators from the departments of radiation oncology, surgery and pathology. Vanderbilt investigators are members of several disease-oriented committees and chair several pilot and group-wide studies. Our bone marrow transplantation service is ECOG approved. We have an outstanding clinical pharmacology program which is well established and is actively participating in ECOG activities. In summary, Vanderbilt investigators are poised to become major contributors to ECOG both in terms of patient accrual as well as the development of innovative treatment protocols. :: KEYWORDS: combination chemotherapy human subject neoplasm /cancer immunotherapy neoplasm /cancer surgery neoplasm /cancer chemotherapy neoplasm /cancer radiation therapy combination antineoplastic therapy humantherapy evaluation ::

Next Action

- [Next award/task](#)
 - [Previous award/task](#)
-

Main Query	Save Current	Glossary of Terms	Search Strategies	FedR&D	Welcome Screen	Show Query Criteria
Summary	View by Fed Org	View by Award/Task	Fed R&D			

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Award/Task Detail



Save current.

Glossary of Terms



Show Query Criteria



View by Fed Org

View by Award/Task

Next action

- [Return to Query Summary page](#)
- [View results by Award/Task](#)
- [View results by Federal Organization](#)
- [Next award/task](#)
- [Previous award/task](#)

Query Conditions

Fiscal year: 1994

Federal Organization: Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or

Department of Health and Human Services / National Institutes of Health / National Institute on Aging or

Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for Occupational Safety & Health

Search term or phrase: ('testicular cancer') ([Skip to first occurrence](#))

Performer(s):

Award/Task Information -- #2 of 26

Parent Federal organizations

Agency [Department of Health and Human Services](#)

Bureau [National Institutes of Health](#)

Program [National Cancer Institute](#)

Project [Cancer treatment \(extramural, intramural, and training\)](#)

Award/Task Detail

Note: Budget authority and expenditures are reported in thousands of dollars

Award id: 20007054788

Award number: U10CA26806 Award type: Project Grant

Estimated start/end dates: Apr 1992 to Mar 1995

Performer: WALTER REED ARMY MEDICAL CENTER All Other Private Entities
WASHINGTON, DC

Place of Performance: Washington DC

Funding:

Total for all years: na

Average Annual Funding: \$81.4K

1994 actual Funding: Federal amount = \$90.7K; Non-Federal amount = \$0.0K

Award/Task Abstract

TITLE: [CANCER](#) AND LEUKEMIA GROUP B:: SHORT DESCR: TO DEVELOP MEANS TO CURE AS MANY [CANCER](#) PATIENTS AS POSSIBLE:: LONG DESCR: The purpose of our research is the investigation of multimodal treatment and [cancer](#) biology in adult patients with neoplastic disease in collaboration with other member institutions in the CALGB. In the past 5 years the protocol accrual at WRAMC has averaged 125/year (range: 110- 146). These accruals have covered a range of cancers with emphasis on breast [cancer](#) and leukemias. About 50% are from companion studies. Studies chaired by WRAMC investigators have involved new drugs in phase II studies, breast [cancer](#), and prostate [cancer](#), reflecting the interests and experience of the P.I. and the second most active investigator, Dr. Nancy Dawson. During the

past 5 years the P.I. has been instrumental in the completion, analysis, and publication of the results from the Testicular Cancer Intergroup Study, resulting in 8 publications from 1987 to present. The P.I. is Chair of the Data Audit Committee and has made 55 audit trips involving 103.5 travel days, while other WRAMC personnel have made 24 audit trips involving 47 travel days. WRAMC investigators are members of the Breast Cancer, Lymphoma, Genitourinary Cancer, Pharmacology and Experimental Therapeutics, Data audit, Surgery, and Radiotherapy Overseers Committees. Dr. Dawson is Chair of the Prostate Cancer Subcommittee. Group data quality has been a pet interest of the P.I., and he has had. input to a number of Group quality assurance issues, such as for companion studies and lymphoma pathology central review, as part of his Data Audit Committee involvement. Data quality at WRAMC has been labeled "excellent" by the Data Audit and SEPR Committees. No patients have been lost-to-follow-up in 13 years and WRAMC rarely has a patient declared ineligible. The two Research Nurses are deeply involved in all aspects of the protocol and related medical care from the first moment a patient is considered for protocol entrance. WRAMC physicians and Research Nurses enter data on CALGB forms as part of the daily patient care which keeps errors to a minimum. Dr. Andejaski is active in CALGB from a standpoint of quality assurance and has a 100% perfect record of irradiation data submission for central review. Dr. Jaques is a trained surgical oncologist and has demonstrated new enthusiasm for CALGB activities after an involuntary (Army duty) hiatus of some 15 months. Dr. Hargis has been involved in "spin-off" studies using Group data; one is complete with a manuscript in press, and one is just beginning. Dr. Diehl has 2 lymphoma studies that he is winding up. Drs. Ward and Hargis are the WRAMC investigators for 2 studies, each limited to 5 CALGB participants. Dr. Weiss is chair of 2 current phase II studies, one in breast cancer and one in myeloma. Dr. Weiss and Dr. Dawson will be the scientific leaders for CALGB activities. All WRAMC personnel enthusiastically participate (as demonstrated by the full attendance at Group meetings) in CALGB and will continue to do so in the future. WRAMC needs the CALGB affiliation to help maintain its ability to provide state-of-the-art cancer care and its oncology fellow training program. The commitment of the WRAMC Army staff is demonstrated by its provision of the civilian personnel slots for the P.I. and the two nurses, provision of extra money for meeting attendance, provision of unlimited mailing, phone, and FAX without charge to this grant, etc. Unfortunately, this support does not extend to providing an administrative assistant for all the CALGB-related workload. Protocol accrual and data quality will continue to be strong at WRAMC, as will the administrative committee input to CALGB. WRAMC investigators will maintain a high level of overall Group involvement that will add to the overall scientific work of CALGB. This is not only true of the personnel named in this application but also of other WRAMC staff who help with CALGB work but are not specifically named. :: KEYWORDS: combination chemotherapy human subject neoplasm /cancer immunotherapy neoplasm /cancer surgery neoplasm /cancer chemotherapy neoplasm /cancer radiation therapy combination antineoplastic therapy computed axial tomography human therapy evaluation ::

Next Action

- [Next award/task](#)
 - [Previous award/task](#)
-



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Award/Task Detail

Main Query	Save Current Query	Glossary of Terms	Search Strategies	Fed R&D Overview	Welcome Screen	ShowQuery Criteria .
Summary	View by Fed Org	View by Award/Task .				

Next action

- [Return to Query Summary page](#)
- [View results by Award/Task](#)
- [View results by Federal Organization](#)
- [Next award/task](#)
- [Previous award/task](#)

Query Conditions

Fiscal year: 1994

Federal Organization: Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or
Department of Health and Human Services / National Institutes of Health / National Institute on Aging or
Department of Health and Human Services / Centers for Disease Control and Prevention / National Institute for Occupational Safety & Health

Search term or phrase: ('testicular cancer') ([Skip to first occurrence](#))

Performer(s):

Award/Task Information -- #3 of 26

Parent Federal organizations

Agency [Department of Health and Human Services](#)

Bureau [National Institutes of Health](#)

Program ■ [National Cancer Institute](#)

Project ■ [Cancer treatment \(extramural, intramural, and training\)](#)

Award/Task Detail

Note: Budget authority and expenditures are reported in thousands of dollars

Award id: 20007014277

Award number: P0ICA38493 Award type: Project Grant

Estimated start/end dates: May 1992 to Mar 1995

Performer: DANA-FARBER CANCER INSTITUTE Other Nonprofit
BOSTON, MA

Place of Performance: Boston MA

Funding:

Total for all years: na

Average Annual Funding: \$1,251.1K

1994 actual Funding: Federal amount = \$1,239.8K; Non-Federal amount = \$0.0K

Award/Task Abstract

TITLE: SOLID TUMOR AUTOLOGOUS MARROW PROGRAM:: SHORT DESCR: TO DEVELOP MEANS TO CURE AS MANY CANCER PATIENTS AS POSSIBLE:: LONG DESCR: The overall objective of the Solid Tumor Autologous Marrow Program (STAMP) is to integrate basic and clinical research with the goal of exploiting intensive combination chemotherapy particularly with alkylating agents. The clinical trials are designed with curative intent for patients with metastatic breast cancer, lymphoma, small cell lung cancer, and testicular cancer. Dose escalation is made possible by advances in supportive care particularly autologous marrow transplantation, the acquisition of marrow stem cells from the peripheral blood, and the use of hematopoietins.::

Next Action

- [Next award/task](#)
- [previous award/task](#)

Main Query	Current, Query	Glossary of Terms	Search Strategies	Fed R&D Overview	Welcome Screen	ShowQuery Criteria
Summary	View by Fed Org	Kew by Award/Task.				

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Award/Task Detail

		Glossary			Xcome Screen	ShowQuery criteria
		View by Award/Task				

Next action

- [Return to Query Summary page](#)
- [View results by Award/Task](#)
- [View results by Federal Organization](#)
- [Next award/task](#)
- [Previous award/task](#)

Query Conditions

Fiscal year: 1994

Federal Organization: Department of Veterans Affairs or
Department of Health and Human Services / National Institutes of Health / National Cancer Institute or
Department of Health and Human Services / National Institutes of Health / National Institute on Aging or
Department of Health and Human Services / Centers for Disease Control and Prevention / Nat] Institute for
Occupational Safety & Health

Search term or phrase: ('testicular cancer') ([Skip to first occurrence](#))

Performer(s):

Award/Task Information -- #4 of 26

Parent Federal organizations

Agency [Department of Health and Human Services](#)
Bureau ... [National Institutes of Health](#)
Program [National Cancer Institute](#)
Project [Cancer treatment \(extramural, intramural, and training\)](#)

Award/Task Detail

Note: Budget authority and expenditures are reported in thousands of dollars

Award id: 20007046347

Award number: R35CA39844 Award type: Project Grant

Estimated start/end dates: Sep 1992 to Apr 1995

Performer: INDIANA UNIVERSITY, BLOOMINGTON State Controlled Institution of Higher Education
BLOOMINGTON, IN

Place of Performance: Bloomington IN

Funding:

Total for all years: na

Average Annual Funding: \$463.2K

1994 actual Funding: Federal amount = \$469.9K; Non-Federal amount = \$0.0K

Award/Task Abstract

TITLE: CLINICAL TRIALS IN ONCOLOGY:: LONG DESCR: Dr. Lawrence H. Einhorn will continue his studies in Clinical [Cancer](#) Research through the Outstanding Investigator Grant. Pivotal studies will continue to be done in patients with [testicular cancer](#). Dr. Tinhorn and co-investigators will evaluate a new aggressive five drug regimen as initial therapy for patients with advanced [testicular cancer](#). New and innovative approaches for salvage therapy of [testicular cancer](#) will also be carefully studied. In addition, correlatives clinical studies will be done evaluating antiemetics and hematopoietic growth factors. :: KEYWORDS: antineoplastic flow cytometry combination chemotherapy drug screening /evaluation human subject testis neoplasm neoplasm /[Cancer](#) chemotherapy human therapy evaluation clone cell oncology::

Next Action

- [Next award/task](#)
- [previous award/task](#)

Main Query	Save Current	Glossary of Terms	Search Strategies	Fed R&D Overview	Welcome Screen	ShowQuery +Criteria' ='
Summary	View by Fed Org	View by, Award/Task				

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Award/Task Detail

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Query Conditions

Fiscal year: 1994

Federal Organization: Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or

Department of Health and Human Services / National Institutes of Health / National Institute on Aging or

Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for

Occupational Safety & Health

Search term or phrase: ('testicular cancer') ([Skip to first occurrence](#))

Performer(s):

Award/Task Information -- #5 of 26

Parent Federal organizations

Agency [Department of Health and Human Services](#)

Bureau [National Institutes of Health](#)

Program [National Cancer Institute](#)

Project [Cancer treatment \(extramural, intramural, and training\)](#)

Award/Task Detail

Note: Budget authority and expenditures are reported in thousands of dollars

Award id: 20007054767

Award number: U10CA16395 Award type: Project Grant

Estimated start/end dates: Apr 1992 to Jun 1994

Performer: NEW YORK UNIVERSITY MEDICAL CENTER Other Nonprofit

NEW YORK, NY

Place of Performance: New York NY

Funding:

Total for all years: na

Average Annual Funding: \$130.9K

1994 actual Funding: Federal amount = \$29.1 K; Non-Federal amount = \$0.0K

Award/Task Abstract

TITLE: ONCOLOGY :: LONG DESCR: The mutually productive association of New York University with the Eastern Cooperative Oncology Group dates back to 1973. This has resulted in continued cross-fertilization of ideas and studies with other group members as well as interdisciplinary cooperation within the institution. Highlights of this involvement include leadership in specific protocols in hematologic neoplasias, melanoma, lung [cancer](#), breast [cancer](#), [testicular cancer](#), head and neck [cancer](#) and colorectal [cancer](#). In addition, New York University [Cancer](#) Center activities in new chemotherapeutic agents, biologic response modifiers and drug-radiation interaction are reflected in co-chairmanship of the New Drug and Pilot Studies Committee, and the Lung [Cancer](#) Committee as well as in vast numbers of groupwide and pilot

studies utilizing these approaches. :: KEYWORDS: laboratory rat lysozyme cell membrane human subject neoplasm /[cancer](#) diagnosis neoplasm /[cancer](#) immunotherapy melanoma neoplasm /[cancer](#) surgery neoplasm /[cancer](#) chemotherapy neoplasm /[cancer](#) radiationtherapy combination antineoplastic therapy human therapy evaluation tissue /cell culture::

Next Action

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-



Strategies



Show Query
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Summary

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new by .
Award/Task

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Federal Organizations Active in Specified Area

Main Query Save Current Query Glossary of Terms Search Strategies Fed R&D Overview Welcome Screen Show Query Criteria

Summary View by Fed Org View by Award/Task

Query Specifications

Fiscal Year: 1994

Federal Organization:

Department of Veterans Affairs or

Department of Health and Human Services / National Institutes of Health / National Cancer Institute or

Department of Health and Human Services / National Institutes of Health / National Institute on Aging or

Department of Health and Human Services / Centers for Disease Control and Prevention / Natl Institute for Occupational Safety & Health

Search term or phrase: ('testicular cancer')

Performer(s):

Overview of Query Results

Note: Budget authority and expenditures are reported in thousands of dollars. A terse outline of all involved federal organizations is also available.

Agency: Department of Health and Human Services

Total BA (94, 95, 96): \$11,040,024K; \$11,411,622K; \$11,848,682K

BA for Related Bureaus (94, 95, 96): \$10,337,997K; \$10,698,079K; \$11,126,145K

BA for Related Programs (94, 95, 96): \$2,020,719K; \$2,086,828K; \$2,175,338K

BA f-r Related Projects (94, 95, 96): \$541,502K; \$530,655K; \$551,174K

5 Related awards/tasks, with outlays/obligations of \$1,944 . OK .

Bureau: ... National Institutes of Health.

Total BA (94, 95, 96) : \$10,337,997K; \$10,698,079K; \$11,126,145K

BA for Related Programs (94, 95, 96):\$2,020,719K; \$2,086,828K; \$2,175,338K

BA for Related Projects (94, 95, 96): \$541,502K; \$530,655K; \$551,174K

5 Related awards/tasks, with outlays/obligations of \$1,944 . OK .

Program: National Cancer Institute

Total BA (94, 95, 96): \$2,020,719K; \$2,086,828K; \$2,175,338K

BA for Related Projects (94, 95, 96): \$541,502K; \$530,655K; \$551,174K

5 Related awards/tasks, with outlays/obligations of \$1,944 . OK .

Project: Cancer treatment (extramural, intramural, and training)

Total BA (94, 95, 96): \$541,502K; \$530,655K; \$551,174K

5 Related awards/tasks, with outlays/obligations of \$1,944 . OK .