Status Report:
Cancer Biomedical Informatics Grid (caBIG®)
Oversight ad hoc Subcommittee

Board of Scientific Advisors

November 7, 2011

March 2011 Report Conclusions

- Support for clinical informatics tools and algorithmic advances is mission-critical for NCI
- Strong community support for original caBIG® vision and goals
- caBIG® successes offset by several serious problems
- Overall impact not commensurate with level of investment

Conclusions, cont'd

- Main problems with caBIG ® approach
  - Cart-before-the-horse grand vision
  - Technology-centric approach to data sharing
  - Unfocused expansion
  - One-size-fits-all approach
  - Unsustainable business model for both NCI and users
  - Lack of independent scientific oversight

Immediate Tactical Recommendations

1. **Institute an immediate moratorium on all ongoing internal and commercial contractor-based software development projects** while initiating a mitigation plan to lessen the impact of this moratorium on the cancer research community.

2. **Institute a one-year moratorium on new projects, contracts and subcontracts** by caBIG®.

3. **Provide a one-year extension on current caBIG®-supported academic efforts** for development, dissemination, and maintenance of new and existing community-developed software tools

Immediate Tactical Recommendations

4. **Establish an independent oversight committee,** representing academic, industrial, and government (NCI, NIH) perspectives to review planned initiatives for scientific merit and to recommend effective transition options for current users of caBIG® tools.

5. **Conduct a thorough audit of all aspects of the caBIG® budget and expenditures.**

caBIG Budget Adjustments

Annual Budget

	FY 2008	FY 2009	FY 2010	FY 2011
caBIG Program	$52,328,321	$55,388,488	$47,222,391	$33,287,546

ARRA Funding (adjusted based on BSA report)			
Budgeted	**Reduction**	**Adjusted Budget**	**Expended**
$103,000,000	$60,699,878	$42,300,121	$41,587,373

caBIG oversight committee progress

- Committee membership established June 2011
- First meeting (in person) July 25, 2011 Chicago
- Subsequent monthly phone meetings to:
  - Develop operating procedures
  - Create working groups

caBIG Oversight ad hoc Subcommittee Group Roster

Daniel Masys, M.D., University of Washington (Chair)

Brian Athey, Ph.D., University of Michigan

Andrea Califano, Ph.D.*, Columbia University

Robert Comis, M.D., Coalition of Cancer Cooperative Groups

Paul Fern, M.B.A., Univ. Washington/Fred Hutchinson Cancer Ctr

Gad Getz, Ph.D., Broad Institute

Joe Gray, Ph.D.*, Oregon Health Sciences University

Rebecca Kush, Ph.D., Clinical Data Interchange Standards Consortium

Lincoln Stein, M.D., Ph.D.*, Ontario Institute for Cancer Researc h

Lynn Vogel, Ph.D., MD Anderson

Jean Y. Wang, Ph.D., University of California, San Diego Cancer Center

Executive Secretaries: John Czajkowski, M.P.A. and Paulette Gray, Ph.D.

Committee Management Officer: Ms. Claire L. Harris

* BSA Member

Working Groups

- Bioinformatics and Basic Cancer Research
  - projects and activities that support, promote and accelerate basic “wet bench” cancer research, as well as bioinformatics analytical methods and tools for in silico research aimed at molecular biology, cells, tissues, and systems biology.
- Clinical and Translational Informatics
  - projects and activities that support cancer-related clinical and translational research, including tissue banking and translation to community practice.
- Informatics Infrastructure
  - infrastructure that crosses application domains, such as terminology and vocabulary systems, and knowledge representation standards.

caBIG project review criteria (10)

1. Does the activity, application or resource meet a well-articulated and attainable need of basic, translational or clinical researchers or cancer health care (ie., is there a ‘driving biological or clinical project’ and are the intended users members of the project team)?

2. How will success or failure be evaluated? Analogous to stopping rules for clinical protocols, what will be the stopping rules for ending the project if it either fails to meet its technical objectives or fails to be adopted even if technically successful?

caBIG project review criteria (10)

3. Will the activity, resource, or application, if successful, make some objectively measurable incremental progress toward the overall caBIG® vision of interoperability of data and systems? Will it enable data sharing and make use of and/or enhance open international standards for research? Will it follow the development principles of caBIG®?

4. Is the activity, resource or application designed to anticipate change in a rapidly expanding knowledge base of science and practice? Flexibility and generalizability are important characteristics for longevity in an era of agile science.

caBIG project review criteria (10)

5. Is the intended deliverable of the project achievable in the time frame and budget proposed?

6. Will the output of the project be broadly implementable by organizations of varying size and sophistication? Will it be used broadly by organizations and institutions outside of NCI/Cancer Centers (e.g. other NIH centers or academic research organizations)?

caBIG project review criteria (10)

7. Is there a documented plan for long term maintenance, enhancement and fiscal sustainability of the activity, application or resource and its user base?

8. What is the user base and has there been a stakeholder assessment to assure that the activity, application or resource will indeed meet a currently unmet need or a reasonably anticipated future need?

caBIG project review criteria (10)

9. Is the project generalizable and likely to create value or address broad needs across the community of cancer centers and investigators? Or would this activity, resource or application be perceived as a “pet project” of an “in” group?

10. Does the activity, resource or application have enough market value to gain adoption without incentives, or if financial or policy incentives are required, are they justified?

Oversight subcommittee review process and output

- NCI provides
  - Overall tracking grid of ongoing caBIG projects
  - Structured project-specific summary sheets for subcommittee review (template created)
- Workgroup review process uses study section scoring (impact score 1-9), with full subcommittee discussion of split scores
- Subcommittee reports scoring and assessment to BSA

Questions?