

**National Cancer Institute (NCI)  
Integrated Canine Data Commons (ICDC) Steering Committee (SC)**

**Teleconference  
Wednesday, April 15, 2020**

---

**Participants (\*Present)**

External Committee Members

Matthew Breen\*  
Renee Chambers  
Dawn Duval\*  
Allison Heath\*  
Will Hendricks\*  
Warren Kibbe\*  
Debbie Knapp, ICDC-SC Chair\*  
Cheryl London\*  
Jeff Trent\*  
Roel Verhaak\*  
Shaying Zhao\*

Internal Committee Members (NCI, National Institutes of Health, and Frederick National Laboratory for Cancer Research [FNLCCR])

Matthew Beyers\*  
Allen Dearth  
Toby Hecht\*  
Paula Jacobs\*  
Tony Kerlavage\*  
Erika Kim\*  
Amy LeBlanc\*  
Christina Mazcko\*  
Philip Musk\*  
Elaine Ostrander\*  
John Otridge\*  
Ralph Parchment, ICDC-SC Managing Secretary\*  
Connie Sommers\*  
Greg Tawa\*

Others

Andrew Fung\*  
Anju Singh\*  
Lori Lydard  
Tara Whipp  
Mary Cerny (writer)\*

## Opening and Welcome

Drs. Knapp and Parchment opened the meeting at 11:32 a.m. ET and welcomed attendees.

## Minutes of the March 2020 Meeting

The minutes of the March 25, 2020, ICDC-SC meeting were accepted as written.

## Reports from the Working Groups (WGs)

### Data Governance Advisory Board (DGAB) Chair's Report

The DGAB has not formally met since the last ICDC-SC meeting, because no new submissions have been received. However, the Board continues to work with the Best Practices Subcommittee (BPS) to determine how best to streamline the data and proposal submission process.

Committee members walked through the data submission process as outlined on the ICDC website at <https://caninecommons.cancer.gov/#/submit>. The submission portal can be accessed directly by clicking “Read More” under the “Submit Data” graphic on the ICDC home page at <https://caninecommons.cancer.gov>. The submission page can also be accessed under the “About” tab at the top of the home page. The submission portal includes a link to the DGAB’s Draft Guidelines for Evaluating Data Submissions During Prototype Phase, through which researchers can make a request to share their data with the ICDC. The site also has a central contact point, [ICDCHelpDesk@mail.nih.gov](mailto:ICDCHelpDesk@mail.nih.gov), that can be used for further instructions or any other questions about the ICDC. Mr. Beyers and another staff member at FNLCR monitor the help desk and respond to incoming inquiries. The staff work closely with submitters and meet via conference call once a submitter’s proposal has been prioritized. The submission process currently requires manual entry, but efforts in conjunction with submitters are underway to streamline the process. Inclusion of a defined process for the submission workflow is planned for the website.

There continues to be a call for more data sets to build a collection of cases and data for the commons. One of the initial steps to expand outreach and increase awareness about the ICDC involves drafting and sending a letter introducing potential contributors to the commons. Text for the letter has been drafted and is close to being finalized. Committee members continue to make progress with activities discussed during the last ICDC-SC meeting, as follows:

- Drs. Hecht and Sommers are working on an overall outreach plan.
- Mr. Beyers posted the revised draft introductory paragraph/text about the ICDC for the letters, postings, and announcements in the ICDC-SC Box folder for final review. Dr. Sommers will send the edited text to Dr. Hecht for a final read-through.
- Dr. Kim and Mr. Beyers are following up with the NCI communications teams.
- Dr. Knapp is following up with industry partners to introduce them to the ICDC as part of this initial outreach.
- Dr. Hendricks and his team have put together a list of candidate publications and groups outside the ICDC-SC to consider contacting for genomic data sets. Between 10 and 15 publications are expected to have data sets that meet the criteria for submission. Dr. Sommers and Mr. Fung are going through the list to put together contact information. In

addition, they are putting together an introductory email using the text drafted by Mr. Beyers.

Canine osteosarcoma genome sequencing data from a collaborative research effort involving several Committee members are being curated in coordination with Dr. Gardner at Tufts University for submission to the ICDC.

A few Committee members said they were having difficulty finding the ICDC website via Google searches. It was noted that the ICDC website is public and can be accessed directly at the link listed above.

#### BPS Chair's Update

The BPS continues to work with the DGAB on elements of the DGAB's Draft Data Submission Guidelines and has put together a list of field types and values for various studies, cases, and other parameters used for data submission (available in the ICDC-SC Box folder). The BPS continues to explore how best to standardize formats for these parameters and create a framework for collecting data across the four areas consistent with the BPS working groups: clinical/pathology, genomics, imaging, and immunology. The goal is to have very clear, concise guidance so that submitters know what information they need to provide in order to streamline the submission process.

Additional efforts include integration of data sets as preliminary test cases for the ICDC, in particular, data from the canine glioblastoma (GBM) study. Other activities include alignment of clinical case information for genomics data, and synergizing with the Observational Medical Outcomes Partnership (OMOP), electronic medical records (EMRs), and other platforms to deploy a common data model.

As previously noted, extensive clinical data are not always available for genomic data sets. For the canine commons, this is not necessarily a problem, as long as case-related information (e.g., age, breed, weight) and sample-specific characteristics (e.g., tumor versus healthy tissue, treatment status, body site, tumor pathology, how samples were preserved) associated with the sequences can be captured. Committee members who have gone or are going through the process for submission of genomic studies, including those without extensive clinical annotations, found the model to be straightforward and accessible.

A meeting is scheduled to target and coordinate a rollout of data sets and data models from Tufts University, the University of Colorado, and the University of California, Davis. The next meeting will focus on information gathering and technical issues related to sampling. Once those technical issues are addressed, the meetings and discussions will be expanded to determine how to integrate the data into the ICDC. The plan is to develop a common tool that can be used to extract clinical data directly from the patients' medical records by using the OMOP platform, which is a good resource for the intersection between human and animal data, and EMR platforms, which may not include research-based questions. The ultimate goal is to create and sustain common data sharing model with a governance structure that allows for data access across the platform. This alternate system would enable cohort discovery and allow for capture of data that might be missed by Research Electronic Data Capture (REDCap). It is not a substitute for REDCap but can complement or supplement REDCap. Creation of a common data

model remains challenging and labor intensive, because structures need to be built to pull data from each individual platform.

Studies may include a range of informative but perhaps ancillary data that are not currently captured as part of the formal data submission process for the ICDC. The focus at this time is on capturing core study data. Formatting for submission of supplemental data is not yet standardized, but annotations around core data can be uploaded as files associated with the main cases and samples. For now, this additional information will still be accessible for data mining, but not directly as part of the data sharing model. Committee members who have gone through the submission request process said manual uploading of extended annotations has not been overly burdensome.

The rate at which core annotated data are being received is slow but is expected to pick up over time. Each submission helps identify additional information that may be more broadly applicable to the core data and subsequent studies in the ICDC. RNA sequencing data, for example, constitute a growing and critical element of data sets that are being more widely requested.

The next meeting of the BPS is scheduled for April 21. Additional updates from the following WGs were provided.

#### *Genomics WG*

The Genomics WG is interfacing with other WGs for feedback and input on identifying and curating genomic data sets for the ICDC. Dr. Gardner from Tufts University has been included in these discussions.

Dr. Ostrander will present information on breed-specific reference genomic data at the next ICDC-SC meeting. Whole genome sequencing is available for approximately 1,500 dogs; of these, 722 have a refined composite data set. Ten de novo projects involving deep sequencing are being done to generate higher-quality reference genomes. Many of the dogs in these projects were solicited from dog shows and were not selected based on health status or medical condition. Sequencing data are often available online before being published. Dr. Ostrander was asked about whether the genomic data sets can be queried to determine which dogs are still alive and whether any developed cancer or any other serious medical illness.

Committee members can contact Dr. Ostrander for additional information, including how to access these data.

#### *Imaging WG*

Data from the GBM study are being cleaned up for submission to the ICDC. Curating MRI and other imaging data from the GMB study is underway. Images are being located and scanned in. Data and images are being collected from home institutions, some of which do imaging off site. About two-thirds of glioma cases are expected to have usable images. The team is working to have scans for each tumor in the data set submitted to the ICDC. One challenge with having imaging data housed in a separate location is determining how to operationalize access for users (e.g., by tagging with a unique identifier). This issue is being addressed within the WG and the BPS at large.

### *Immunology WG*

The WG is interested in PRECINCT's use of the nanostring platform to evaluate immune shifts following treatment. The goal of accessing the nanostring platform is to develop a standalone platform with validated probes that is accessible to everyone and that will allow for more accurate evaluation of the immune landscape. Dr. London's team submitted supplements under the group's U01 award to do analyses for the nanostring platform and to identify shared costs to fund the project. Dr. Nicola (Nicky) Mason at the University of Pennsylvania School of Veterinary Medicine and Dr. Steven Dow at Colorado State University are taking the lead on this work. Samples are ready for interrogation of potentially relevant genes and immune markers. A timeline for milestones needs to be developed.

Dr. Knapp expressed an interest in collaborating with the group. Dr. London will connect Dr. Knapp with the lead researchers on the project.

The proposed supplements have met the initial threshold for funding. An update on the availability of supplemental funding for FY2020 is noted below.

### **Other Issues**

#### Clinical and Translational Science Award One Health Alliance (COHA) Website

Dr. London reported that the COHA website, <https://ctsaonehealthalliance.org>, has officially launched. As stated on the site, "COHA is composed of veterinary schools partnered with medical and other colleagues through a National Institutes of Health Clinical Translational Science Award (CTSA). COHA's mission is to advance understanding of diseases shared by humans and animals. The alliance leverages the expertise of physicians, research scientists, veterinarians, and other professionals to find solutions for medical problems and to address the well-being of humans, animals, and the environment."

Dr. London guided Committee members through a brief tour of the site, highlighting its main areas, including the research, resources, COVID-19, membership, and news tabs. The resources tab, for example, includes sections on biobanking, clinical trials, education and training, outreach, and the research workbench. One of the more immediate as well as longer-term goals is to populate the site with a wide range of data, information, and resources. OMOP data will be uploaded to the research workbench section. Information about the ICDC and a link to the ICDC website data could go under the "all resources" subsection. New tabs and sections can be created to accommodate ongoing needs and considerations. Mr. Beyers will contact Dr. London on how to link to the ICDC.

#### Supplemental Funding

Dr. Hecht noted that funds have been transferred to the NCI U24 award program, are available, and must be spent by the end of the current fiscal year (September 30, 2020).

#### Appreciations

Drs. Knapp, Parchment, and Hecht thanked Committee members for their ongoing efforts, given the challenges the current public health situation presents. The group also thanked Mr. Beyers for his upcoming volunteer EMT service and thanked others serving as frontline responders.

## **Administrative Items**

### May ICDC-SC Meeting

The next meeting of the ICDC-SC will be held via teleconference on Wednesday, May 20, 2020, from noon to 1:00 p.m. ET. The change in the starting time for the May meeting is to accommodate members' schedules for that day and is not a permanent change. Dr. Parchment will forward the meeting information and materials ahead of the May teleconference.

### DGAB and BPS Meetings

Dates and times of other upcoming meetings are still to be determined. Details will be distributed as they become available.

### Honoraria

External members were reminded to continue to forward the paperwork for their honoraria to Ms. Lydard. Anyone having problems with the form or reimbursement should contact Dr. Parchment.

### Conflict of Interest (COI)/Confidentiality Agreements: Annual Update

There are no changes to the COI and confidentiality policies for the ICDC-SC, but external ICDC-SC members need to complete the form(s) and identify any COI issues they may have on an annual basis, which is coming up for most members. The policies continue to promote an open culture within the committee while maintaining confidentiality of discussions and data that are not yet in the public realm.

## **Action Items**

- Committee members will continue to follow up on their respective activities as part of the plan to expand outreach for proposal submissions, as noted during the meeting. Additional action items from the current meeting include:
  - Dr. Sommers will send the revised/edited introductory paragraph on the ICDC to Dr. Hecht for a final read-through.
  - Dr. Sommers and Mr. Fung will put together a list of investigators/groups to consider contacting for submission of genomic data sets.
- Dr. London will connect Dr. Knapp with the lead researchers on the nanostring platform project.
- Mr. Beyers will contact Dr. London on linking the CTSA website to the ICDC website.
- External committee members were reminded to complete the ICDC-SC COI and confidentiality form(s), which is required on an annual basis.
- External Committee members were asked to complete the COI and confidentiality forms. Completed forms should be submitted to Ms. Lydard at [lori.lydard@nih.gov](mailto:lori.lydard@nih.gov).
- Topics for future meetings should be forwarded to Drs. Knapp and Parchment.
- Dr. Parchment will forward the logistics information and materials for the next teleconference as they become available.

## **Adjournment**

The meeting was adjourned at 12:25 p.m. ET.