2022-1-6 Meeting notes

Date

06 Jan 2022

Attendees

Committee Member	Present	Absent
Kuffel, Gina (NIH/NCI) [C]	X	
Pihl, Todd (NIH/NCI) [C]		X
Unknown User (leblancak)	X	
Otridge, John (NIH/NCI) [C]	X	
Kim, Erika (NIH/NCI) [E]	X	
Sommers, Connie (NIH/NCI) [E]	X	
Debbie Knapp	X	
Toby Hecht	X	
Unknown User (parchmentr)	X	

Goals

- Discuss updates to ICDC and define emerging strategies and priorities

Box Folder

https://nih.box.com/s/5wmrgl85z6fxpo3ldhanxzmmqq3ekfy7

Relevant Links for Today's Meeting

1. Candidate Publication List
2. Submission Folder for 1st Candidate Publication
3. Submission Folder for PanCancer Study
4. Data Transfer Agreement
5. Data Use Guidelines

Outstanding Action Items

Discussion items

Item	Who	Talking Points
Steering Committee Meeting Updates	Unknown User (parchmentr)	Next meeting is the 26th
ICDC Next Phase	Unknown User (hechtt)	- Next steps for soliciting a small group of comparative oncology researchers who are ICDC users - Recruitment results from PRECINCT SC meeting (Dec. 10th)- only 1 person followed up - Actual formal recruitment may be necessary

DGAB Updates	Kuffel, Gina (NIH /NCI) [C]	- Data Transfer Agreement (DTA) has been finalized and is ready for use - Folder containing any artifacts related to the DTA can be found here - UBC02 - Basal and Luminal Molecular Subtypes in Naturally-Occurring Canine Urothelial Carcinoma Are Associated With Tumor Immune Signatures and Dog Breed - To be released to production next week, adds 122 files (349.5 GB) - Data ingestion PanCancer study to begin soon - Folder containing all submission artifacts for this study can be found here - Communications with authors of first candidate publication test case from Candidate Publication List - Data Submission Request was completed on their behalf - Email was sent by Warren Kibbe on behalf of DGAB on 11/24/21 - Acknowledgment email sent by Gina 12/2/21 - Follow-up email sent by by Gina 1/6/22 - Folder containing all submission artifacts for this test case can be found here
Data Use Guidelines	Kuffel, Gina (NIH /NCI) [C]	- Review by Jason Cristofaro has been completed - Link to draft document can be found here
User Research for ICDC by the Office of Communications and Public Liaison (OCPL)	Kuffel, Gina (NIH /NCI) [C]	- Collecting use cases to test during the remote usability sessions with participants - To start off the test, the researcher will put the participant in a hypothetical scenario. From there, participants will be asked to use the resources on the portal to meet a goal. For example, PDC's first scenario was this: "You are conducting research for a study on Lung Cancer. For this study, you want to better understand which peptides may drive subtypes of the cancer. Using this site, find data sets on Lung Adenocarcinoma that will help you with your research. The data set(s) should include: - Solid tissue - Peptide spectral matches - Gene p53 - Recruitment is critical- these will be folks targeted for user interviews - DGAB members - PRECINCT members - Pharmacodynamics group - Other groups, channels, or individuals?
ICDC Site Updates	Kuffel, Gina (NIH /NCI) [C]	- Successful production release on December 15th - Data dictionary demo if others are interested

Minutes (Not Verbatim)

TH- If you find differences, this can be compared with human data to compare the prevalence.

EK- Potential extra credit question

TH- Should include some human aspect.

EK- Scope of this exercise is limited to ICDC portal

TH- Emphasize the downstream possibilities.

DK- There is a group at Purdue utilizing brain cancer data in ICDC to ask new questions, one thing they have done is to acquire true normals, what is in ICDC now are adjacent normals. These new controls provide new insights. They are looking at astros vs. oligos. It might help to have the normals available.

TH- Range of expertise is needed to form a committee for the future phase of ICDC. We have to know how can we make sense of the data and develop new hypothesis. Very few people have volunteered.

CS- Dan Regan, Nikki, and Cheryl volunteered.

AL- Happy to volunteer as well.

TH- Will organize something early February for a formal brainstorming session. This will be used to inform the case proposed to Ned Sharpless. I would like to get Warren Kibbe on this panel. As head of the DGAB it would be appropriate.

DK- Happy to volunteer as well.

TH- Thinking through some ideas myself. Outside the box ideas are welcome as well.

RP- From precision medicine, what is the dog model for the human disease I am studying, what are the considerations for differences in dosing ideas

TH- Come up with a statement for a precision medicine use case

AL- Harmonizing theme is we need data that helps to inform the molecular landscape of various cancers with an emphasis on targeted drug development. On Osteo we have discovered a gene signature that clusters and this holds true in humans as well. Opens up ideas of drug therapies.

RP- Body of knowledge available if there is translational research is being conducted.

TH- Longitudinal studies would be preferential.

RP- Clinical agents that have performed well in canine that have never been tried in human.

TH- Is it useful for PD group to hear about ICDC?

RP- I think so, we are in the process of coming up with some use cases for possible data submission, I think people don't ask questions because it is not part of the their daily work life at this moment. Use case: where is LINE3 expressed in the dog

AL- Many people have FFPE samples of canine cancers available, trouble is validated tissue expression, don't have good IHC antibodies.

TH- Immunology field in canines is way behind that of human.

Previous ICDC Use Cases from Steering Committee

1. Genomic correlates across platforms (DNA, RNA, protein).

2. Correlating multi-omics data with clinical annotation and phenotypes, particularly outcomes.

3. Comparative analyses of canine and human. Examples include:

    1. Search for conserved mutations between canine and human tumors

    2. Disease diagnosis (e.g. cancer type) and classification mapping between canines and humans

    5. Gene expression changes and mutational profiles associated with therapeutic response and outcome

    6. How do sporadic tumors in non-human mammals compare to sporadic human tumors?

    7. Correlations and model building from radiomic and pathomic features extracted from medical and histopathologic images with outcomes and genomics, as is currently being widely done with human images

    8. Develop biomarkers of response and resistance in humans by analyzing the responses and genomic signatures in dogs.

The Future of ICDC Committee

1. Toby Hecht
2. Connie Sommers
3. Amy LeBlanc
4. Debbie Knapp
5. John Otridge
6. Ralph Parchment
7. Erika Kim
8. Dan R

Previous Meeting Minutes (Not Verbatim)

EK - Collected use cases in 2019 before any data was in ICDC. Around 8 use cases were documented. Many of the responses included high-level, overarching concepts. To uncover the real scientific use cases we nee do talk with PostDcos and Grad Students.

TH- Comparative Oncology community will be interested in specific questions.

EK- NCPI has a team comprised of NHLBI, NCI, Common Fund, and NHGRI to provide use cases of interoperability across the platforms and cloud resources. We are exploring congenital cancer in Gliomas, we might be able to add canine glioma data to identify any correlations that may exist. Use cases are in the works. We solicited researchers to get the scientific use cases.

TH- Longitudinal studies can be very useful in dogs. We can use that data to draw comparisons in humans. We will probably give some funding to the Dog Aging Study that may be matched by the Dog Aging Institute. They have ~30k dogs they are following, healthy dogs, many develop cancer. They are willing to sequence if they had the funding.

JO- Valuable just to have healthy, normal dogs as well. Could they be a source for deposit into ICDC?

TH- Reference standards are prolific at this point. There is a new canine reference German Shepherd 1.0 named Mischka.

Action items

- [x] Kim, Erika (NIH/NCI) [E] to send out Data Use Guidelines to Office of Data Sharing
- [ ] Kuffel, Gina (NIH/NCI) [C] to send official list of Future Committee to Toby