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| **5.1** | **Study Title** |  |
| **PI** |  |
| **Ref** |  |
| **Reviewer** |  |
| **What is your recommendation for this item?** |
| [ ] Approve without changes [ ] Approve out of session with changes [ ] Not Approve and resubmit |
| **Review**  |
| * 1. **Research Merit and Integrity (NS1.1):**
 |
| **Does the research proposal ask a relevant/worthwhile research question?**  | **Yes/No** |
| Aim of study is to analyse cells and immune markers in blood to create a blood-based test to diagnose cancer and determine its extent. |
| **Has the researcher justified the need for this research?** | **Yes/No** |
|  |
| **Will the proposed methodology answer the research question(s)?**  | **Yes/No** |
| Will use advanced statistical and machine learning techniques to create prediction models. Specimens will be collected prospectively. Specimens will be destroyed at the conclusion of the project. Will involve ~500 newly-diagnosed colorectal, lung, melanoma, prostate, and primary brain cancers at stage I-IV, and 100 matched controls.Step 1: markers will initially be selected based on rank enrichment in cancer patients (stage III-IV) using a small cohort of participants from each cancer type & controls. These markers will be used to identify immune signatures from the entire group of participants. Markers with the best separation between cancer and control subjects will be used to create a high throughput assay for use in the entire study group. These will be used to train machine models in Step 2.Step 2: Patients with stage I-IV cancer recruited. Analyses of markers from Step 1.Preliminary studies have used these methods in animal models. Lab methods appear to be established.*Will data be sought from external sources (GP, private labs etc)?* *Will blood be drawn outside routine venesections (PICF says “will typically not require additional needle insertions”)?**Does CRF need to be stored in three locations? Could this lead to discrepancies in results?* *[up to P19 Protocol]* |
| **Is the protocol following good clinical practice?** | **Yes/No** |
| [insert comments] |
| **Are the power calculations, indicating the number of recruits required, accurate?** | **Yes/No** |
| Previous studies indicate ~100 controls and ~100 patients with each cancer type can be used to generate that describe observations well. Protocol points out that estimation of sample size is difficult given the novelty of this area.Recruitment of brain cancer patients expected to be slower than other cancer types. |
| **Is the proposed statistical analysis robust and accurate enough to deal with the data generated?** | **Yes/No** |
| Investigators appear to be familiar with methods. Insufficient expertise to comment. |
| **Are the drug safety issues fully addressed?** | **Yes/No** |
| [insert comments] |
| **Are the risks to recruits detailed in the proposal listed fully and completely in the PICF?** | **Yes/No** |
| Risk of diagnosis of unrecognised disease considered to be very low because of novelty of results and long timespan before results know. Significant incidental findings will be communicated to the participant.Fresh blood required for leukocyte markers. Will a second blood collection be required for Step 2?PICF:*Use of jargon: “biomarkers’ (p1)**Inclusion/exclusion criteria don’t need to be listed**Need to include risks of incidental diagnoses in Risks section**Consent form: The blood test developed in this study is available for research purposes only and cannot be obtained on prescription. – needs changing* |
| **Suggested Comments to the Researcher from HREC**  |
| **RMI (NS1.1)** |
| **Do you have comments for the HREC to consider against any of the other NS criteria?** | **Yes/No** |
| **Justice (NS1.4)** |
| **Beneficence (NS1.6)** |
| **Respect (NS1.10)** |
| **General Comments on Risks and Benefits** |