

STATEMENT OF WORK (SOW)

1.0 TITLE

Validation study of California Breast Cancer Registry Data with Synthetic Census Tracts

2.0 BACKGROUND

The National Cancer Institute (NCI)'s Surveillance, Epidemiology, and End Results (SEER) Program (<https://seer.cancer.gov/>) collects and releases de-identified data for individual cancer diagnoses and outcomes in the United States. The geographic locations of patients at the time of diagnosis are extremely valuable for studying associations between characteristics of an area and cancer rates, as well as for detecting cancer clusters and monitoring geospatial disparities in cancer burden.

Census tracts are a very useful geographic unit to work with but are not publicly available. The Synthetic California Breast Cancer Registry Data (SynCan) is a pilot data product that utilizes statistical models to synthesize census tracts of residence for each breast cancer patient diagnosed in California from 2006 to 2017. A selected set of variables were modeled in a manner that potentially changes the census tracts of all patients within the county boundaries while preserving the covariate relationships between the census tracts and the selected variables. Details about an earlier version of SynCan, the synthesis methodology, and the utility of SynCan are documented in Yu et al. (2017).

The SynCan makes it possible to provide external users with access to census tract data, although synthesized, that are not publicly available because of confidentiality concerns. Without synthetic census tracts, much of the research that requires census tracts would be logically difficult or impossible, as data permission must be obtained separately from each cancer registry and most (if not all) permissions require an IRB review. While most states within SEER catchment areas are supported by one Central Cancer Registry (CCR), the state of California is supported by four CCRs. For straightforward descriptive analyses, the SynCan has been shown to produce similar cancer statistics by census tract-based socioeconomic variables. The usefulness of SynCan for complex and useful studies has yet to be established.

2.1 OBJECTIVE

The objectives of this project are for the Contractors to submit useful analysis plans and table shells of results from these analyses. The Contractors are also required to send programming codes of these analyses (preferably written in SAS or R) to NCI and the results from these analyses based on the SynCan. NCI will run the analyses using the actual confidential census tract data and report the results back to the Contractors for publication (including all analyses to be reported). NCI will compile the results across the studies and plans to publish comparisons of SynCan results and validated results in a peer-reviewed publication. Interested Contractors have the option to be collaborators on this publication.

3.0 SCOPE

3.1 Contractor responsibilities

The Contractors shall furnish all personnel, materials, services, and facilities that are necessary for or incident to the performance of the work as set forth in section 4 below. This acquisition shall include services to 1) develop useful analysis plans and table shells for the NCI to

approve; 2) develop and fit approved analyses using the SynCan, i.e. California breast cancer database with synthetic census tracts; and 3) write programming codes in R or SAS to execute the approved statistical models and submit the codes to the NCI.

3.2 Government responsibilities

The Government will 1) review and select useful analyses; 2) provide contractor with the access to SynCan data; 3) run approved analyses using the real confidential census tract data; 4) return real analysis results to the contractors which the contractors are allowed to use for publications; 4) review contractors' publications for any confidentiality issues prior to submission and 5) conduct a validation study comparing the results from SynCan with the cancer registry data with real census tracts.

4.0 PURCHASE ORDER REQUIREMENTS

The Contractor shall perform the following tasks:

Task 4.1. Submit detailed analysis plans and table shells for these analyses to the NCI for approval;

Task 4.2. Conduct approved statistical analyses using the SynCan, i.e. California breast cancer database with synthetic census tracts, and submit the SynCan analytic results to the NCI;

Task 4.3. Write programming codes in R or SAS to execute the final statistical models and submit the codes to the NCI.

5.0 TYPE OF ORDER

This is a firm fixed price purchase order.

6.0 NON-SEVERABLE SERVICES

The services specified in each contract line item (CLIN) have been determined to be non-severable services - a specific undertaking or entire job with a defined end-product of value to the Government.

7.0 PERIOD OF PERFORMANCE

The period of performance shall be 11 months from the date of award.

8.0 PLACE OF PERFORMANCE

All services shall be performed at the Contractor's facility.

9.0 REPORT(S)/DELIVERABLES AND DELIVERY SCHEDULE

All reports shall be submitted via e-mail in Microsoft compatible format and all data products shall be submitted to the NCI/ DCCPS/SRP Technical Point of Contact (POC) for review, comment and approval. All deliverables shall be sent electronically (Microsoft Word, Excel, R or SAS unless approved by the NCI Technical POC) per the following deliverable schedule.

DELIVERABLES	DELIVERABLE DESCRIPTION	DUE DATE
1	A report describing detailed analysis plans and table shells for analysis results.	2 months after award
2	Programming codes in R or SAS to execute the statistical models agreed upon by the NCI.	6 months after award
3	Analytic results of all statistical models estimated from the SynCan.	11 months after award

10.0 PAYMENT

Payment shall be made upon acceptance of all deliverables. Payment authorization requires submission and approval of invoices to the NCI Technical POC and NIH OFM, in accordance with the attached payment provisions listed below. The following clause is applicable to all Purchase Orders, Task or Delivery Orders, and Blanket Purchase Agreement (BPA) Calls: **Prompt Payment** (Jan 2017) FAR 52.232-25. Highlights of this clause and NIH implementation requirements follow:

I. Invoice Requirements

- A. An invoice is the Contractor's bill or written request for payment under the contract for supplies delivered or services performed. A proper invoice is an "Original" which must include the items listed in subdivisions 1 through 12, below, in addition to the requirements of FAR 32.9. If the invoice does not comply with these requirements, the Contractor will be notified of the defect within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish, and 5 days for perishable agricultural commodities, dairy products, edible fats or oils) with a statement of the reasons why it is not a proper invoice. (See exceptions under II., below.) Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor.
1. Vendor/Contractor: Name, Address, Point of Contact for the invoice (Name, title, telephone number, e-mail and mailing address of point of contact).
 2. Remit-to address (Name and complete mailing address to send payment).
 3. Remittance name must match exactly with name on original order/contract. If the Remittance name differs from the Legal Business Name, then both names must appear on the invoice.
 4. Invoice date.
 5. Unique invoice #s for all invoices per vendor regardless of site.
 6. NBS document number formats must be included for awards created in the NBS: Contract Number; Purchase Order Number; Task or Delivery Order Number and Source Award Number (e.g., Indefinite Delivery Contract number; General Services Administration number); or, BPA Call Number and BPA Parent Award Number.
 7. Data Universal Numbering System (DUNS) or DUNS + 4 as registered in the Central Contractor Registration (CCR).
 8. Federal Taxpayer Identification Number (TIN). In those exceptional cases where a Contractor does not have a DUNS number or TIN, a Vendor Identification Number (VIN) must be referenced on the invoice. The VIN is the number that appears after the Contractor's name on the face page of the award document.
 9. Identify that payment is to be made using a three-way match.
 10. Description of supplies/services **that match** the description on the award, by line billed.*

11. Freight or delivery charge must be billed as shown on the award. If it is included in the item price do not bill it separately. If identified in the award as a separate line item, it must be billed separately.
12. Quantity, Unit of Measure, Unit Price, Extended Price of supplies delivered or services performed, as applicable, and that **match** the line items specified in the award.*

* NOTE: If your invoice must differ from the line items on the award, please contact the Contracting Officer before submitting the invoice. A modification to the order or contract may be needed before the invoice can be submitted and paid.

- B. Shipping costs will be reimbursed only if authorized by the Contract/Purchase Order. If authorized, shipping costs must be itemized. Where shipping costs exceed \$100, the invoice must be supported by a bill of lading or a paid carrier's receipt.
- C. Mail an original and 1 copy of the itemized invoice to:

National Institutes of Health
Office of Financial Management,
Commercial Accounts
2115 East Jefferson Street, Room 4B-432, MSC 8500
Bethesda, MD 20892-8500

For inquiries regarding payment call: (301) 496-6088

To facilitate the prompt payment of invoices, it is recommended that the vendor submit a photocopy of the invoice to the "Consignee" designated for the acquisition in blocks 6A – 6E of the face page of the Order/Award document.

II. Invoice Payment

- A. Except as indicated in paragraph B., below, the due date for making invoice payments by the designated payment office shall be the later of the following two events:
 1. The 30th day after the designated billing office has received a proper invoice.
 2. The 30th day after Government acceptance of supplies delivered or services performed.
- B. The due date for making invoice payments for meat and meat food products, perishable agricultural commodities, dairy products, and edible fats or oils, shall be in accordance with the Prompt Payment Act, as amended.

III. Interest Penalties

- A. An interest penalty shall be paid automatically, if payment is not made by the due date and the conditions listed below are met, if applicable.
 1. A proper invoice was received by the designated billing office.
 2. A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, or Contractor compliance with a term or condition.
 3. In the case of a final invoice for any balance of funds due the Contractor for supplies delivered or services performed, the amount was not subject to further settlement actions between the Government and the Contractor.

- B. Determination of interest and penalties due will be made in accordance with the provisions of the Prompt Payment Act, as amended, the Contract Disputes Act, and regulations issued by the Office of Management and Budget.

**IV. PROVIDING ACCELERATED PAYMENT TO SMALL BUSINESS
SUBCONTRACTORS, FAR 52.232-40 (December 2013)**

- a) Upon receipt of accelerated payments from the Government, the Contractor shall make accelerated payments to its small business subContractors under this contract, to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract, after receipt of a proper invoice and all other required documentation from the small business subContractor.
- b) The acceleration of payments under this clause does not provide any new rights under the prompt Payment Act.

Include the substance of this clause, include this paragraph c, in all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial items.