



ROE's on Questions

- **We will be answering frequently asked questions received prior to the town hall at the end of the brief**
- **There will be approximately 30 additional minutes for questions from the field**
- **If you do not wish to ask a question directly or if we run out of time to answer all questions, please note a link will be distributed following the town hall to ensure your question is received and we have an opportunity to address it.**



Air Force Global Strike Command

Missile Field Cancer Risk Town Hall



**Gen Thomas Bussiere
AFGSC/CC
Current As Of: 11 May 23**

Overall Classification: UNCLASSIFIED



Agenda

- **AFGSC/CC Opening Remarks**
- **Update on Missile Community Cancer Concern Activities**
 - Study team site visits
 - Hazard sampling plan
 - Formal Study
- **Question and Answer session**
- **Closing remarks to AFGS/CC**



Opening Comments

AFGSC/CC

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Missile Community Cancer Activity Overview

- Increased concern for Non-Hodgkin Lymphoma and other cancers among missileers and associated career fields (current and former)
- AFGSC/CC directed
 - An assessment of current risk in the field
 - Formal study assessing cancer incidence
 - Communication: Commanders, communities, advocates
 - Townhalls, Commander's toolkits and medic information bundles
 - MCCS Study web site: Info products, FAQs, releases and stories
 - Briefs: AF, USSF, Joint, and Congressional leadership



Missile Community Cancer Activities



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USAFFSAM Site Visits

- February to March 2023: Aerospace Med, Public Health, Bioenvironmental Engineering, researchers
- Outstanding support and incredible access
- Oriented team to missile career field operations, personnel and occupational environment
- No factors identified that would be considered immediate concerns for acute cancer risks
- No specific factors noted as unique to Malmstrom to indicate elevated environmental risk or current reason to suspect increased cancer risks present





USAFSAM Site Visits



- Classified tapes, papers and TDIs regularly burned in the LCC
- Some equipment in the LCC and LF are still labeled as containing PCBs
- Significant LCC and MAF design differences between bases
- Location unique exposures, local environmental/agricultural factors need to be considered as studies continue
- Crew alerts likely represents less than 25% of total exposure to local environmental & agricultural factors
- Missile Maintainers & RIVET MILE civilian workers also have occupational hazards and exposures
- CE Manuals differ per Wing: creates some inconsistencies, especially with water testing between the wings
- Cleaning of the LCC differs significantly between bases
- Access for PH, BEE and Flight Surgeons has been historically limited
- Career field identifiers have changed over the years





USAFFSAM's Immediate Recommendations

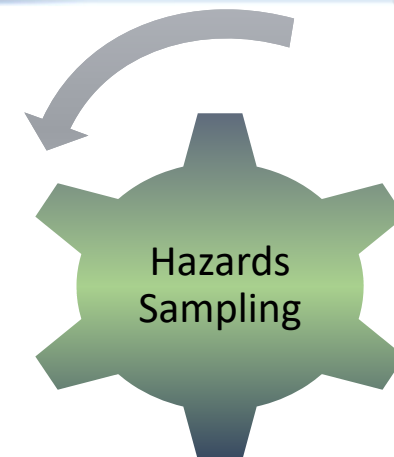
- Cease burning activities -- alternative destruction method for materials
- Work with SPO to identify 5Ws of PCB material removal, update signage
- Comprehensive environmental sampling plan developed with AFGSC/SG
- Improve communication/coordination of medic & missile community
- One-time deep cleaning of LCC, to include air ducts, etc
- Monitor new equipment or upgrades for potential environmental hazards
- Clearly demarcate RF hazard areas
- Ensure running vehicle parked at safe distance from air intakes/occupied buildings
- Consolidate and standardize CE manuals and processes
- Standardized environmental upgrades for crew comfort (incandescent bulbs, improved flooring, water filters, etc)
- Continue to prioritize preventive maintenance & environmental upgrades while awaiting Sentinel





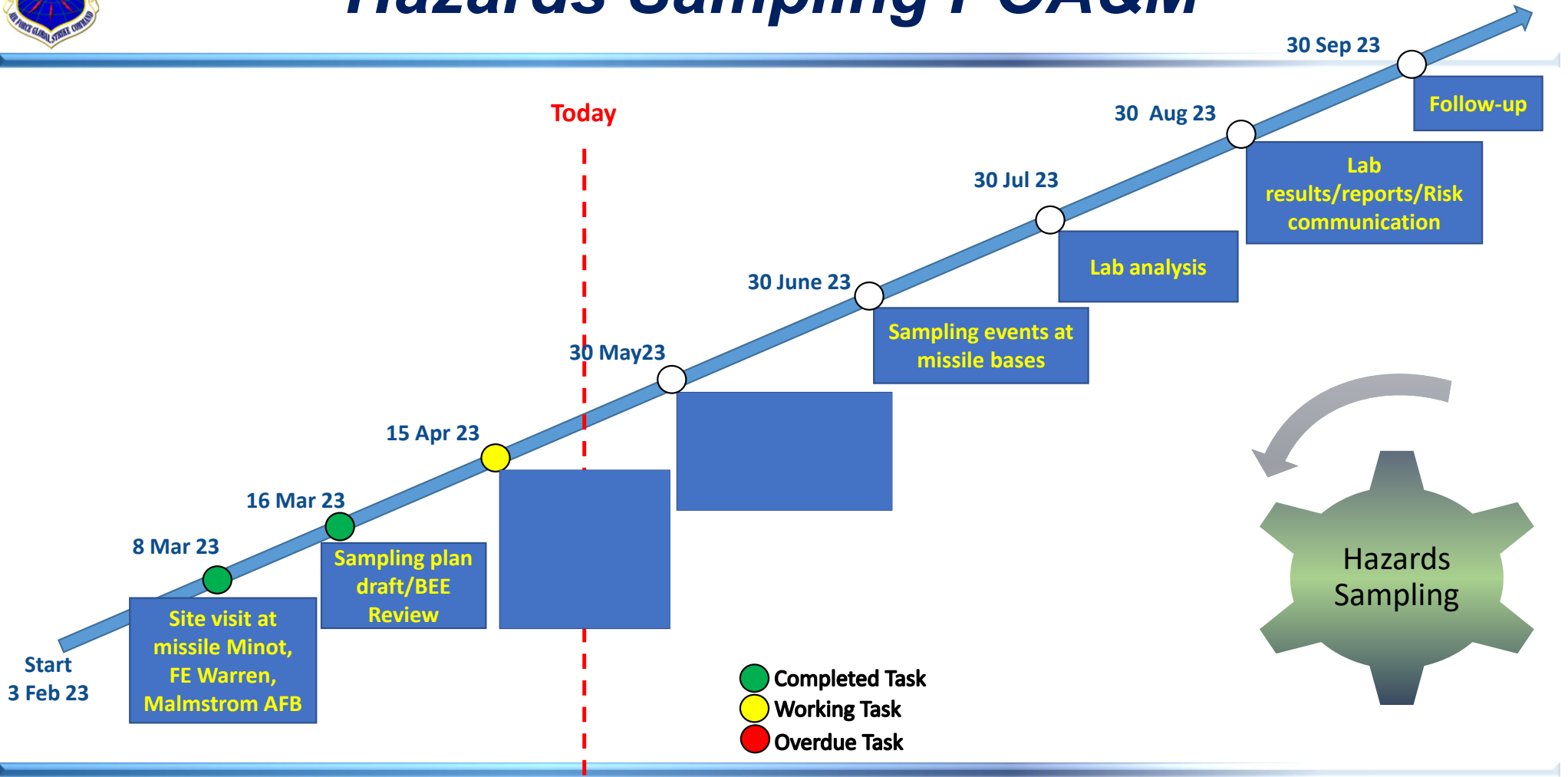
Potential Hazards Review

- Radon
- PCBs
- PFAS/PFOA
- Asbestos
- Organophosphates (agricultural spraying of pesticides)
- Volatile Organic Compounds (VOCs)
- General indoor air quality/air exchanges per hour
- Water quality
- Burning of thermal paper and other materials in LCC
- Ozone or other airborne contaminants
- Off-gassing of hydrogen from motor-generator and batteries
- Carbon Monoxide and Diesel fumes/exhaust (vehicles and LCEB)
- Sodium chromate solution (chiller fluid for some LF systems)
- Hypergolic fuel (monomethyl hydrazine & nitrogen tetroxide oxidizer)
- Potassium Superoxide
- Fungicidal cork





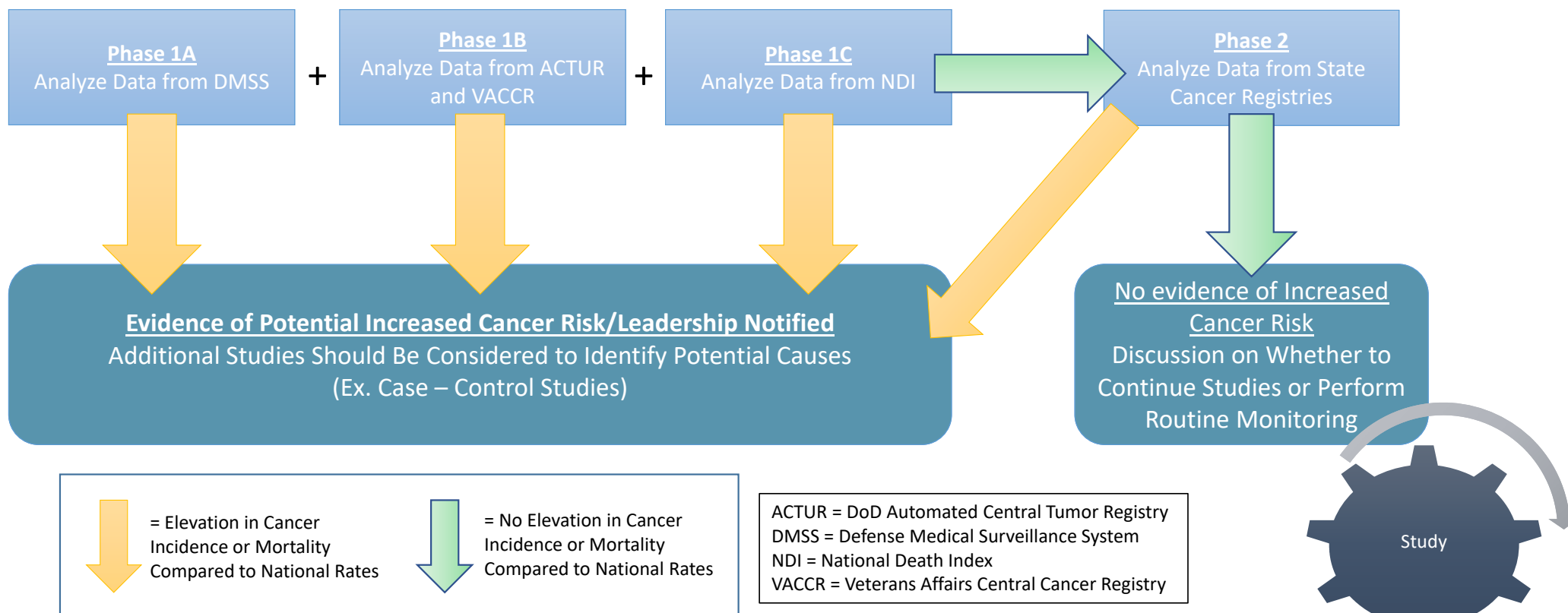
Hazards Sampling POA&M



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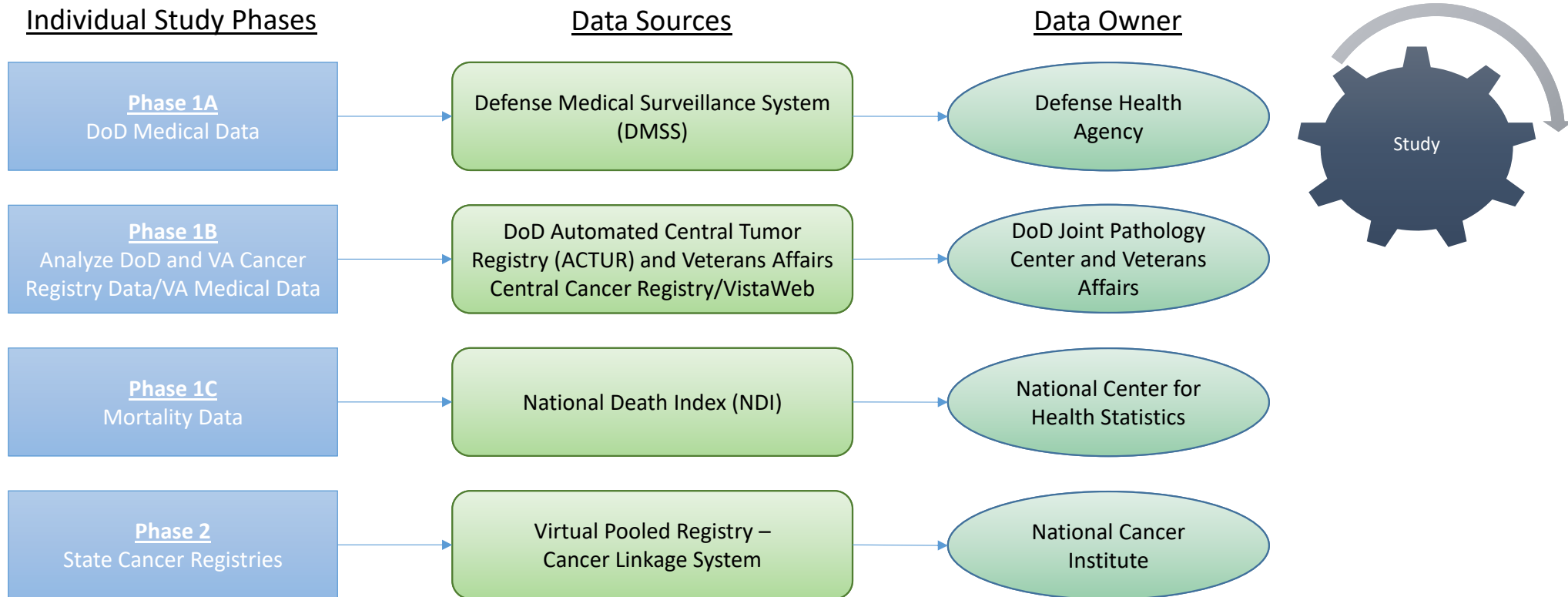


Phases of both Non-Hodgkin Lymphoma & Multiple Cancer Studies





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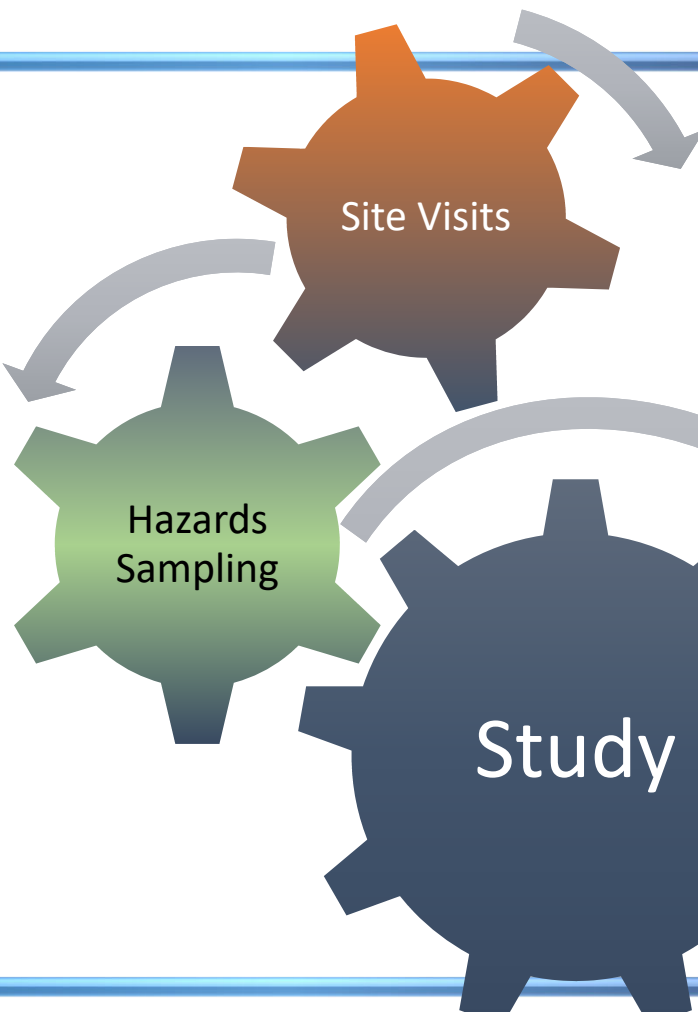


- ACTUR, VACCR, and NDI Data all take approximately 2-3 months for processing.
- Virtual Pooled Registry Data can take up to 18 months.

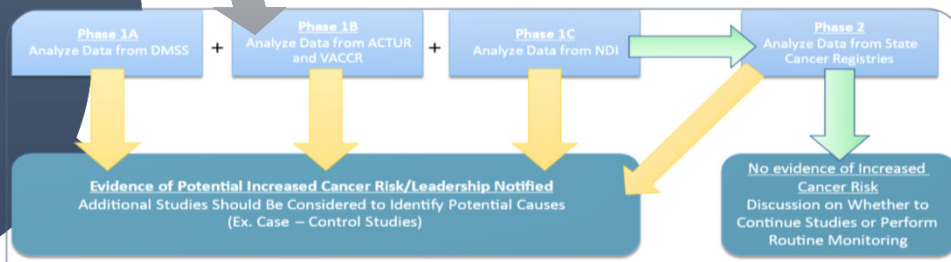


Spectrum of Missile Community Cancer Activities

- Radon
- PCBs
- PFAS/PFOA
- Asbestos
- Organophosphates (agricultural spraying of pesticides)
- Volatile Organic Compounds (VOCs)
- General indoor air quality/air exchanges per hour
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- USAFSAM, AFGSC/SG and DHA visited each active base Feb - Mar to orient to MAFs and MLFs
- Team comprised of Aerospace Medicine, Public Health, Bioenvironmental Engineering, research experts
- Informed risk exposure evaluation & cancer study design
- Team assessed and developed standardized hazards sampling plan
- Will use newest modern technologies and devices
- Training of local teams will increase long-term capability
- Team reevaluating long term monitoring practices considering findings from hazard sampling activities
- Lessons learned will iteratively be feedback to check practices



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↑ = Elevation in Cancer Incidence or Mortality Compared to National Rates
 ↓ = No Elevation in Cancer Incidence or Mortality Compared to National Rates

ACTUR = DoD Automated Central Tumor Registry
 DMSS = Defense Medical Surveillance System
 NDI = National Death Index
 VACCR = Veterans Affairs Central Cancer Registry



Questions



AFGSC/CC Closing Comments

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