

# **Pratt & Whitney Exploratory Epidemiology Study**

**Epidemiology Component**

**Progress Report**

**October 11, 2005**

**University of Pittsburgh**

**Graduate School of Public Health**

**Department of Biostatistics**

# Study Researchers

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- **Gary Marsh, PhD (Professor)**
  - Principal Investigator: Develop & implement epidemiologic study design, direct statistical analyses, coordinate other project components
- **Ada Youk, PhD (Assistant Professor)**
  - Principal Scientist: Coordinate and conduct all statistical analyses
- **Jeanine Buchanich, MPH (Sr. Research Specialist)**
  - Project Manager: Supervision of project staff, data collection & management, direct day to day operation



# Study Personnel

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- **Zb Bornemann** (Research Specialist)
  - Case-control data collection & management
- **Charles Alcorn** (Sr. Systems Analyst)
  - Coordination of computer systems development
- **Michael Lann** (Systems Analyst)
  - Development of computer systems, data management
- **Annette Krag-Jensen** (Systems Analyst)
  - Data management, computer systems
- **Michael Cunningham** (Masters RA)
  - Data management, statistical analysis



# Outline

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- Overview of study design
- Cohort study progress
- Case-control study progress
- Projected project timeline
- Outstanding issues



# 2-Part Study Design

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Part 1: Historical cohort study

Part 2: Nested case-control study

*Includes workers from 8 CT sites:*

*N. Haven, E. Hartford, Middletown, Rocky Hill,  
Cheshire, Southington – Aircraft Rd, Southington – Newell  
St, Manchester Foundry*



University of Pittsburgh, Graduate School of Public Health  
*Department of Biostatistics*

# Part 1: Historical Cohort Study

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- All persons ever employed 1952-01 at one or more of 8 CT sites
  - Includes work at plants in Maine, Florida & Georgia
- Mortality (1952+ or 1976+ for brain cancer)
- Cancer Incidence (1952+ or 1976+ for brain cancer)



# Part 2: Nested Case-Control Study

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- All cases of malignant & benign brain cancer matched to multiple control subjects on event age, race, sex and year of birth
- Living subjects or knowledgeable informants contacted and interviewed to obtain data on possible risk factors for brain cancer
- Consent for 3 different sub-studies: interview, medical records review and genetic



# Cohort Enumeration Progress

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- 292,000 subjects' records processed
- Approximately 223,000 unique subjects
- Over 845,000 work history entries
- Approximately 130,000 dept/job pairs
- Cohort data processing concluding this month



# Mortality Tracing Progress

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- SSA & NDI applications submitted and approved
- State applications being submitted and approved
- Phase 1 trace (~78K subjects) completed in June 2005
- 14,000 deaths identified (all causes)
- Phase 2 trace will be conducted in late fall 2005



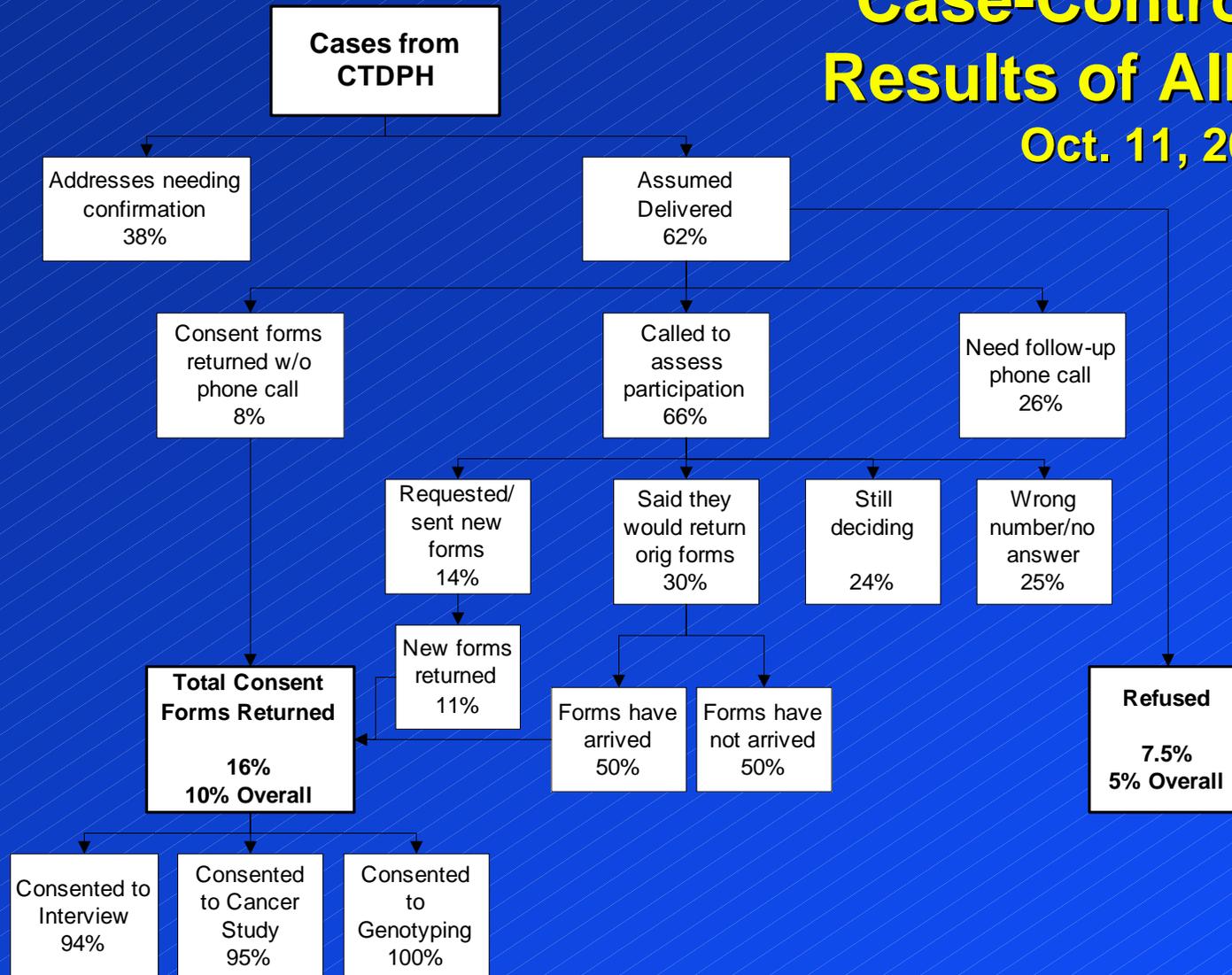
# Incidence Tracing Progress

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- 3/4 of PW subjects have been traced through CTDPH
- Final CTDPH match for remaining subjects planned for Nov/Dec 2005
- Other state applications in progress
  - 12 states covering 95% of deaths



# Case-Control Study Results of All Mailings Oct. 11, 2005



# Case-Control Study Highlights – I

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- Mailings to cases Jan, July & Sept 2005
- Total from first 2 mailings: 16% consented; 5% refused; 41% haven't responded; 38% need to be contacted
  - Contact rate has increased with little corresponding increase in participation
- Follow-up calls ongoing
  - 2/3 of those called never send forms back



# Case-Control Study Highlights - II

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- Extensive efforts underway to locate unknown addresses
- Modified tissue specimen request/ consent form to accommodate legal needs
  - Re-sending revised consent form to all non-respondents
- Interviews, medical records & tissue acquisition ongoing



# Timeline of Study

| Component                  | 2004                        | 2005 | 2006 | 2007 | 2008 | 2009 |
|----------------------------|-----------------------------|------|------|------|------|------|
| Cohort study               | R = study results presented |      |      |      |      |      |
| Data processing            |                             |      |      |      |      |      |
| Tracing                    |                             |      |      |      |      |      |
| General mortality analysis |                             |      |      | R    |      |      |
| Work-related analysis      |                             |      |      |      | R    | R    |
| Case-Control study         |                             |      |      |      | R    | R    |
| Genetic study              |                             |      |      | R    |      |      |
| Exposure assessment        |                             |      |      |      |      |      |



# Outstanding Issues

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- Status of supplemental funding
  - Revised supplemental proposal submitted Oct 3, under review by P&W
- Case-control study response rates
  - Difficulties locating next-of-kin
  - Difficulties obtaining response (positive or negative)
  - Concerns of participants

