



The Center for Biostatistics provides statistical analysis, data management, and high performance computing services to internal and external research teams. It is located in the heart of the Texas Medical Center on the Houston Methodist campus.

Request services online:
houstonmethodist.org/biostatistics

Center for Biostatistics

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HOUSTON METHODIST
 RESEARCH INSTITUTE

**CENTER FOR
 BIOSTATISTICS**



Houston Methodist Research Institute

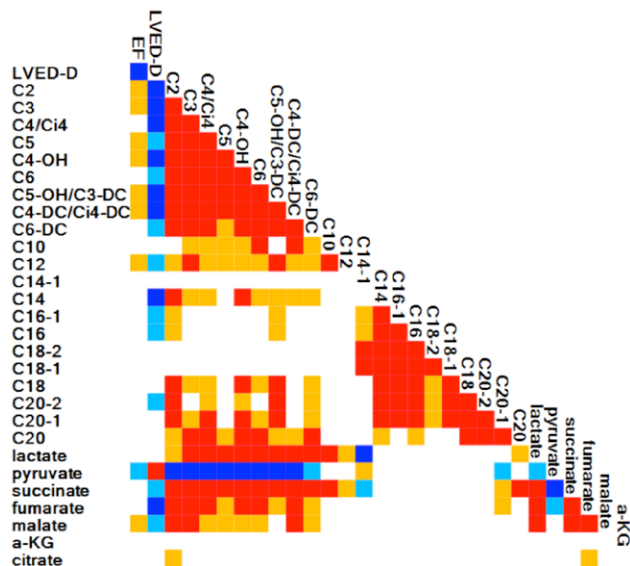
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The Center for Biostatistics

The Center for Biostatistics is a fee-for-service Core which provides consultation on study design and analyses to grant/contract-supported investigative research teams and clinical research groups. Center personnel participate in grants, contracts, teaching, and private consultations. Altogether, the cumulative experience of core personnel in statistics, mathematics, computation, and data management exceeds 50 years.



Statistical Analysis Services

- Study design and conceptualization
- Data collection, storage/retrieval, warehousing
- Sample size determination and statistical power
- Percentage points for discrete and continuous probability distributions (Binomial, Poisson, Standard Normal, Student's t, F-ratio, Laplace, Skew-Normal, Logistic, etc.)
- Monte Carlo simulation and uncertainty analysis
- Inferential hypothesis testing
- Linear models (ANOVA, ANACOVA, MANOVA, regression)
- Categorical modeling (log-linear, linear categorical regression, logistic regression)
- Univariate and multivariate regression modeling and diagnostics
- Survival and propensity scoring analysis
- Longitudinal data analysis (GLM, GEE, RMANOVA)
- Bioinformatics (microarray QC, normalization, gene profile identification, cluster, heat maps)
- Data mining (knowledge discovery and pattern recognition in data/images, unsupervised class discovery, supervised class prediction, nonlinear dimensional reduction, duo-mining)

"The Biostatistics Core has been a fundamental asset in our research projects. Under the leadership of Dr Peterson, they have been consistently prompt and responsive to our requests and have been eager to collaborate in major grant applications. We have successfully competed for NIH funding with an application that required sophisticated and committed statistical support. It simply would not have been possible without their help"

Miguel Valderrábano, M.D., FACC,
Houston Methodist DeBakey Heart & Vascular Center

Hardware/ Statistical Software

- **Computational resources:** high performance computing cluster and work stations
- **Data mining & pattern recognition software:** Peltarion synapse, Predictive Dynamix, Stat-Soft Data Miner, Golden Helix, MatLab
- **Statistical software:** bulk analytical analysis (Stata and R Bioconductor), power and sample size determination (PASS 12), data analysis (SAS & SPSS)
- **Other:** Minitab, Sigmastat, Sigmaplot