

BAYESIAN METHODS

Lab notes

Lab 3 MULTIPARAMETER MODELS: NORMAL AND MULTINOMIAL

Two R and BUGS examples

- Example 1** The univariate Normal model with unknown mean μ and variance σ^2
- Reference** *Congdon's book*: pag. 21 , Example 2.4 Survival times from carcinoma
- Language** BUGS *Program 2.4 Carcinoma survival*; R *norm2.r*
- Subject** *Which is the length of survival expected for a new patient in the same conditions as survey patients? and the probability of a survival time exceeding 150 weeks? and has age affect on these values?*
- Example 2** The Multinomial model
- Reference** *Congdon's book*: pag. 39, Example 2.16 Cancers in women
- Language** BUGS *Program 2.16 Female Cancers*; R *mnomial.r*
- Subject** *In 1995, breast cancer in the UK accounted for the 18female cancer deaths. Which is the credible interval for this rate in a situation where we have 11 cancer types?*

The text of the examples (from *Congdon's book*) and the related bugs programs (which can be downloaded at <http://www.mrc-bsu.cam.ac.uk/bugs/weblinks/webresource.shtml>) are written down in *norm2.b* and *mnomial.b* (at the course web page).