Publicacions més rellevants de la línia de recerca:
Aplicacions de l'anàlisi de supervivència

Referència: Ruiz, L., Paredes, R., Gómez, G., Romeu, J., Domingo, P., Pérez-Álvarez, N., Tambussi, G., Llibre, J.M., Martinez-Picado, J., Vidal, F., Fumaz, C.R., Clotet, B. and the TIBET Study Group. Antiretroviral Therapy Interruption Guided by CD4 cell Counts and Plasma HIV-1 RNA Levels in Chronically HIV-1 Infected patients. *AIDS*, **21(2)** (2007), pp. 169–178.

Abstract: Objective. We evaluated the safety of CD4+- count and plasma HIV-1 RNA (pVL)-guided treatment interruptions (GTIs) and determined predictors of duration of treatment interruption. **Methods**. Chronically HIV-1-infected adults with sustained CD4+ counts > 500 cells/mm3 and pVL< 50 copies/mL were randomly assigned to either continue with standard antiretroviral therapy (control group, $n = 101$) or to interrupt therapy aimed at maintaining CD4+ counts above 350 cells/mm3 and pVL below 100,000 copies/mL (GTI group, $n = 100$). Both groups were followed for 2 years. **Results**. There were no AIDS-defining illnesses or deaths in either group. Compared to controls, subjects interrupting therapy reduced treatment exposure by 67%, but suffered significantly more adverse events related to the intake of medication or to therapy interruption (relative hazard, 2.71; 95% CI: 1.64 to 4.49, $P < 0.001$), mainly due to an excess in mononucleosis-like symptoms. While GTI subjects demonstrated improvements in the psychosocial spheres of quality of life and pain reporting, GTIs had no effect on the physical aspects of quality of life. Although both groups had a similar hazard for developing CD4+ count < 200 cells/mm3; at least 10% of subjects on GTIs had CD4+ counts < 350 cells/mm3 at every time-point. Drug resistance mutations were detected in 36% of subjects but were selected de novo only in subjects interrupting non-nucleoside reverse transcriptase inhibitor therapy. Lower CD4+ nadir, higher set-point pVL and prior exposure to suboptimal regimens were all independent predictors of the need to reinitiate treatment. **Conclusions**. Overall, GTIs were not as safe as continuing therapy. Despite achieving some improvements in quality of life, GTIs did not reduce the overall rate of management- related adverse events.

Referència: Salvador, A., Varela, P., Fiszman, S.M. and Gómez, G. Estimating the shelf life of brown pan bread, suitability of survival analysis methodology. *Journal of Food Science*, **71 (4)** (2006), pp. 321–325.

Abstract: This paper uses survival analysis methodology to estimate the shelf life of brown pan bread. The key concept of survival analysis is to focus the shelf-life estimation on consumer

rejection rather than on product deterioration. The likelihood function, which corresponds to the joint probability of the consumers' observations, is established for a suitable parametric model. The parameters of the model are estimated via the maximization of the likelihood function. From these, the survival function, as well as other quantities of interest is estimated. Different models were applied to the brown pan bread data and used to predict, and compare, the shelf life of brown pan bread for $F(t) = 0.25$ and 0.50 (25 and 50% consumer rejection). The variation in consumer's global acceptability of the product throughout its shelf life was studied.

Referència: Fuster, D., Huertas, J.A., Gómez, G., Solà, R., García, J.G., Vilaró, J., Pedrol, E., Force, L., Tor, J., Sirera, G., Videla, S., Planas, R. and Clotet, B. Baseline factors associated with haematological toxicity that leads to a dosage reduction of pegylated interferon-alpha2a and ribavirin in HIV- and HCVcoinfected patients on HCV antiviral therapy. *Antiviral Therapy*, **10** (2005), pp. 841-847.

Abstract: OBJECTIVE: To assess the baseline factors associated with haematological toxicity that lead to ribavirin or pegylated interferon (peginterferon) dosage reductions in hepatitis C and human immunodeficiency virus (HCV/HIV)-coinfected patients. **DESIGN:** Multicentre, prospective, observational study. Setting: Eleven hospitals in Spain during the period 2002-2003. **SUBJECTS AND METHODS:** One-hundred and forty-two HIV/HCV-coinfected patients received peginterferon-alpha2a plus ribavirin. Baseline characteristics and haematological parameters were recorded at baseline, week 4, 8, 12, 24 and 48. Cox's regression model was used to study the factors associated with the appearance of a haemoglobin level below 10g/dl (haemoglobin-endpoint), a neutrophil count below 750/mm(3) (neutrophil-endpoint) and a platelet count below 50,000/mm(3) (platelet-endpoint). **RESULTS:** Nineteen patients (13.4%) reached the haemoglobin-endpoint, 22.5% the neutrophil-endpoint and 7% the platelet-endpoint. Mean time of follow-up was 8 months (+/-3.5). A baseline haemoglobin level below 14g/dl [hazard ratio (HR): 3.65; 95% confidence interval (CI): 1.46-9.06] and treatment with zidovudine (HR: 3.25;95% CI: 1.31-8.11) were the independent factors associated with the appearance of the haemoglobin-endpoint. A baseline neutrophil below 2050/mm(3) (HR: 3.59; 95% CI: 1.77-7.28) and baseline weight $<$ 60 kg (HR: 2.21; 95% Cl: 1.04-4.56) were independently associated with the appearance of the neutrophil-endpoint. Baseline platelet count (x1000/mm(3) decrease) (HR: 1.074; 95% CI: 1.04-1.11) was independently associated with the appearance of the platelet-endpoint. **CONCLUSIONS:** Baseline factors allow the identification of a subset of HIV/HCV-coinfected patients who are prone to experience haematological toxicity during HCV antiviral therapy.