

Poster no. H-1732

47th Interscience Conference on Antimicrobial Agents and
Chemotherapy, September 17–20, Chicago. USA.

Three-Year Survival of HCV-HIV Coinfected Liver Transplant Recipients (OLT) is Similar to that of HCV Monoinfected Recipients.

José M. Miró,¹ Miguel Montejo,² Lluís Castells,³ Antonio Rafecas,⁴ Pilar Miralles,⁵ Jesús Fortún,⁶ Marino Blanes,⁷ Manuel de la Mata,⁸ José A. Pons,⁹ Asunción Moreno,¹ Gloria de la Rosa,¹⁰ Elisa de Lazzari,¹ Antonio Rimola,¹
and the Spanish OLT in HIV-Infected Patients Working Group.

¹Hosp. Clínic-IDIBAPS. Univ. of Barcelona, Barcelona; ²Hosp. Cruces, Bilbao; ³Hosp. Univ. Vall d'Hebrón, Barcelona; ⁴Hosp. Univ. Bellvitge, Barcelona; ⁵Hosp. Gregorio Marañón, Madrid; ⁶Hosp. Ramón y Cajal, Madrid; ⁷Hosp. La Fe, Valencia; ⁸Hosp. Univ. Reina Sofía, Córdoba; ⁹Hosp. Univ. Virgen de la Arrixaca, Murcia; ¹⁰Organización Nacional de Trasplante (ONT), Madrid, Spain.

E-mail address: jmmiro@ub.edu

Background: Recurrent HCV after OLT is a major cause of graft loss and death. Preliminary studies suggest poorer survival in HCV-HIV coinfecting than in monoinfected patients (pts). This study determined 3-year survival in Spanish HCV-HIV coinfecting and HCV monoinfected OLT recipients (rcps).

Methods: 51 consecutive HCV-HIV coinfecting pts with OLT between 2002-2005. Data were obtained from the FIPSE OLT-HIV-05-GESIDA 45-05 database. HIV-infected rcps were matched with 1,177 HCV-monoinfected pts who underwent OLT during the same period in the same 14 institutions that performed OLT in HIV-infected pts. Data for HIV-negative rcps were obtained from the ONT database.

Results: 12 (24%) HCV-HIV coinfecting and 273 (23%) HCV monoinfected pts died during a median (IRQ) follow-up of 1.3 (0.5-2.4) yrs. Survival (95% confidence intervals) rates at 1, 2 and 3 years for HCV-HIV coinfecting and HCV monoinfected pts were 88% (74%-94%) vs. 81% (78%-83%), 75% (58%-86%) vs. 74% (70%-76%) and 64% (43-79%) vs. 69% (65%-72%), respectively (p=NS). Graft survival rates at 3 yrs were also similar in both groups. The hazard risk (95% CI) of death adjusted by age, gender and presence of hepatocellular carcinoma as an indication for OLT was not different for HIV-positive or -negative rcps (1.74 [0.70-4.35]).

Conclusions: Patient and graft survival in HCV-HIV OLT coinfecting pts is similar at mid-term (3 yrs) to that of HCV monoinfected OLT rcps.

BACKGROUND

Recurrent HCV after OLT is a major cause of graft loss and death. Preliminary studies suggest poorer 3 year survival in HCV-HIV coinfecting patients than in monoinfected patients.*

OBJECTIVE

The aim of this study was to know the 3-year survival rate in Spanish HCV-HIV coinfecting patients with OLT in comparison with HCV monoinfected OLT recipients.

* Norris et al. Liver Transpl 2004;10: 1271-1278; De Vera et al. Am J Transplant. 2006; 6:2983-93; Duclos Vallée J et al, 57th AASLD, Boston, 2006 Abstract 772.

PATIENTS & METHODS (I)

- Prospective study of all HIV-1-infected patients who underwent OLT in Spain.
- HIV (stage, CD4 cell count, plasma HIV-1 RNA viral load, ART), liver disease (etiology, stage), OLT characteristics at baseline and after OLT, and anti-HCV treatment characteristics were collected using a standardized CRF.
- Each site used the same immunosuppressive regimens & prophylaxis protocols as for their HIV-negative patients.

OLT INCLUSION CRITERIA IN HIV-INFECTED PATIENTS*

- **Liver criteria**: the same as for the non-HIV-infected population.
- **HIV criteria**:
 - 1) **Clinical**: no previous C events (CDC, 1993) except some OIs (TB, Can, PCP); and,
 - 2) **Immunological**: pre-SOT CD4 cell count >100 cells/mm³ for OLT; and,
 - 3) **Virological**: RNA HIV-1 viral load BDL on cART or, if detectable, post-SOT suppression predicted.
- **Drug abuse**: A) No heroin or cocaine abuse for >2 years; B) No alcohol abuse for >6 months.

* Miró JM et al. Enferm Infecc Microbiol Clin. 2005; 23:353-362.

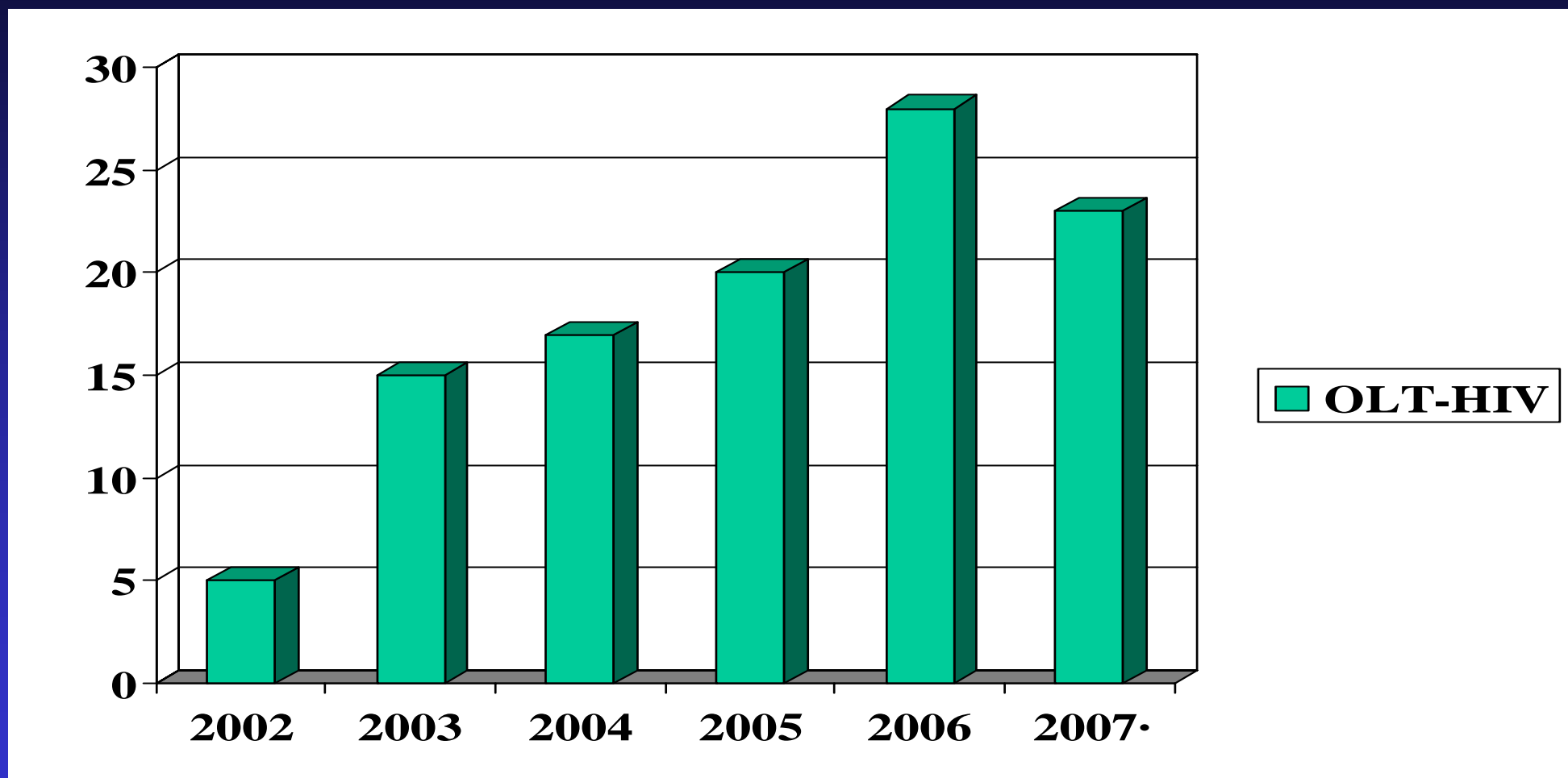
CASES & CONTROLS (II)

- **Cases (HCV+HIV coinfecting patients)**
 - **Fifty-one** consecutive HCV-HIV coinfecting patients with OLT between 2002-2005.
 - Data were obtained from the FIPSE OLT-HIV-05-GESIDA 45-05 database.
- **Controls (HCV monoinfected patients)**
 - HIV-infected recipients were matched with **1,177** HCV-monoinfected patients who underwent OLT during the same period in the same 14 institutions that performed OLT in HIV-infected patients.
 - Data for HIV-negative recipients were obtained from the OLT database.

STATISTICAL ANALYSIS

- Categorical variables were compared using Fisher's exact test while continuous variables were compared using the Student t test.
- Patient survival analysis was performed using the Kaplan-Meier method and groups were compared using the log-rank test and Cox regression analysis.
- All tests were two-tailed and the confidence level was set at 95%.
- The statistical analysis was performed using STATA (StataCorp. 2003. Stata Statistical Software: Release 8.2. College Station, TX: Stata Corporation).

Spanish Cohort of OLT in HIV-infected patients (FIPSE OLT-HIV-05 / GESIDA 45-05)(N=108)



*Data updated: September 12th, 2007; there were 108 OLT in 103 patients; 26 died (25%).

Spanish Cohort of OLT in HIV-infected patients (FIPSE OLT-HIV-05 / GESIDA 45-05)(N=108)

Hospitals	No. cases	No. deaths	Patients in waiting list
Hosp. Cruces, Bilbao	17	3	3
Hosp. Bellvitge, Barcelona	13	2	-
Hosp. Vall d'Hebrón, Barcelona	13	2	1
Hosp. Clínic, Barcelona	9	2	4
Hosp. Ramón y Cajal, Madrid	8	3	2
Hosp. 12 de Octubre, Madrid	10	1	7
Hosp. Gregorio Marañón, Madrid	9	3	1
Hosp. La Fe, Valencia	8	2	2
Hosp. Reina Sofía, Cordoba	4	1	1
Hosp. Virgen Arrixaca, Murcia	2	2	1
Hosp. Virgen del Rocío, Sevilla	2	1	1
Hosp. Juan Canalejo, La Coruña	2	1	1
Hosp. Santiago Compostela	3	1	2
Hosp. Clinico Lozano Blesa, Zaragoza	3	0	1
Hosp. Central de Asturias	3	0	-
Hosp. Carlos Haya, Málaga	1	1	2
Hosp. Marques Valdecilla, Santander	1	1	-
Total	108	26 (25%)	29

Main Characteristics & Outcome

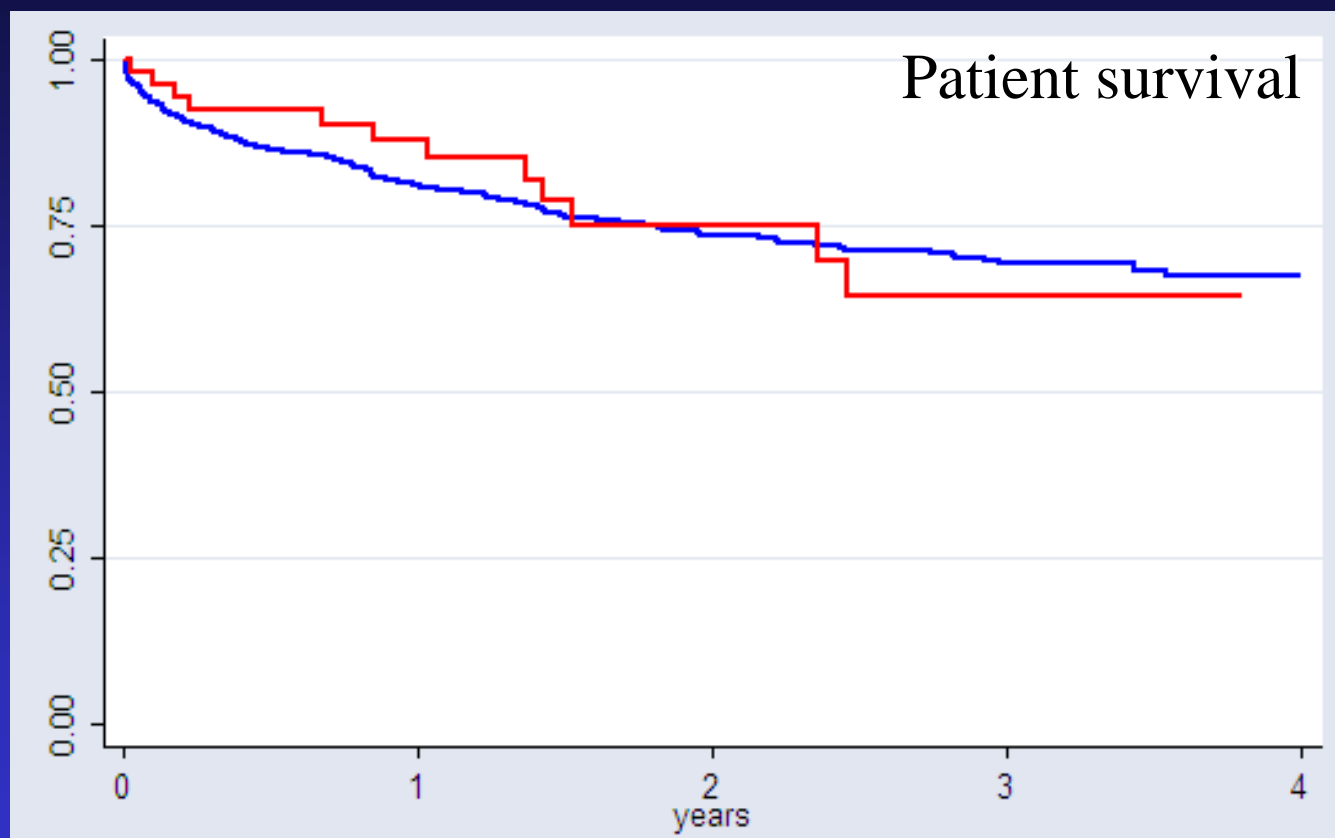
	HIV+HCV N=51	HCV N=1,177
Male gender	39 (75%) ⁺	824 (70%) ⁺
Age (years)*	41 (38-45) ⁺	56 (46-72) ⁺
HBV coinfection	7 (14%) ⁺	90 (8%) ⁺
HCC**	8 (16%) ⁺	376 (32%) ⁺
Follow-up (yrs)*	1.4 (0.8-2.5)	1.2 (0.5-2.3)
Retransplantation	2 (4%)	38 (3%)
Death	12 (24%)	273 (23%)

* Median (IQR); ** Hepatocellular carcinoma; * p<0.05.

Three-year patient survival of OLT in HCV/HIV-coinfected recipients was similar to that of HCV-monoinfected patients

Survival at:	HIV + Recipients N=51	HIV - Recipients N=1,177	p
1 year	88%	81%	NS
2 years	75%	74%	NS
3 years	64%	69%	NS

Kaplan-Meier analysis of the cumulative patient survival after OLT in HCV-infected patients according to HIV status.

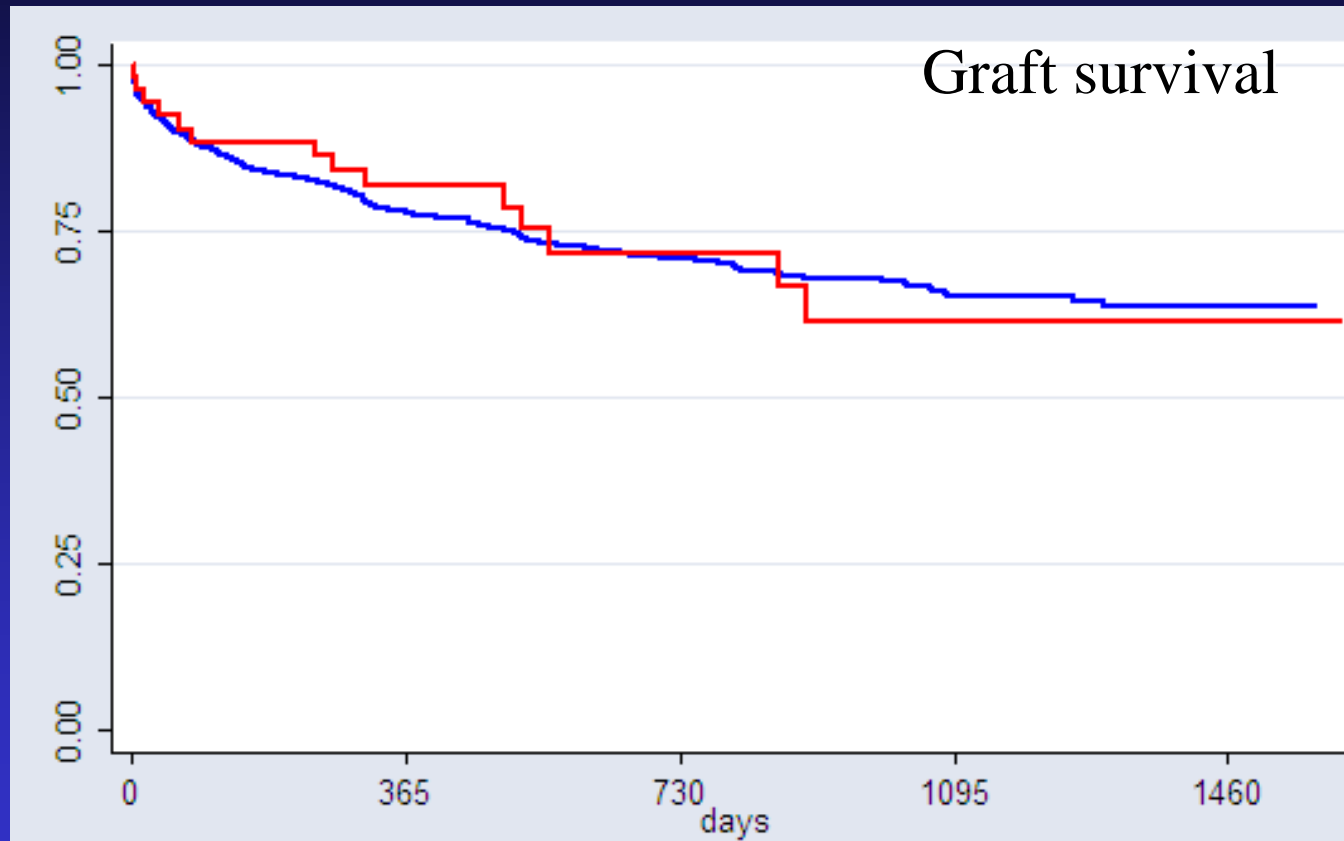


— HIV -	1,177	687	386	179	10
— HIV +	51	34	18	8	2

Three-year graft survival of OLT in HCV/HIV-coinfected recipients was similar to that of HCV-monoinfected patients

Survival at:	HIV + Recipients N=51	HIV - Recipients N=1,177	p
1 year	82%	78%	NS
2 years	72%	71%	NS
3 years	61%	65%	NS

Kaplan-Meier analysis of the cumulative graft survival after OLT in HCV-infected patients according to HIV status.



— HIV -	1177	665	371	173	10
— HIV +	51	32	18	8	2

RESULTS

- Survival (95% confidence intervals) rates at 1, 2 and 3 years for HCV-HIV coinfecting and HCV monoinfected patients were 88% (74%-94%) vs. 81% (78%-83%), 75% (58%-86%) vs. 74% (70%-76%) and 64% (43-79%) vs. 69% (65%-72%), respectively (p=NS).
- Graft survival rates at 3 years were also similar in both groups.
- The hazard risk (95% CI) of death adjusted by age, gender and presence of hepatocellular carcinoma as an indication for OLT was not different for HIV-positive or -negative recipients (1.74 [0.70-4.35]).

CONCLUSIONS

- Patient and graft survival in Spanish HCV-HIV OLT coinfectd patients was similar at mid-term (3 years) to that of HCV monoinfected OLT recipients.
- The Spanish results are better than those previously reported at 3 years in the US and some European countries (France, UK)*.
- A longer follow-up (5 years) of the Spanish cohort is needed in order to confirm or refute these results.

* Norris et al. Liver Transpl 2004;10: 1271-1278; De Vera et al. Am J Transplant. 2006; 6:2983-93; Duclos-Vallée J et al, 57th AASLD, Boston, 2006 Abstract 772.

SITES AND INVESTIGATORS (I)

HOSP. DE BELLVITGE – U.B. (BARCELONA)

G. Rufi, A. Rafecas, FX Xiol, J.Fabregat, J.Torras , E.Ramos, L.Lladó,
M. Santín, J. Figueras.

HOSP. RAMON Y CAJAL (MADRID)

R. Barcena, E. de Vicente, J. Fortún,C. Quereda, S. Moreno.

HOSP. VALL D'HEBRON – U.A.B. (BARCELONA)

V. Vargas, C. Margarit, Ll. Castells, E. Ribera and A. Pahissa

HOSP. DE CRUCES (VIZCAYA)

M. Montejo, A. Valdivieso, M. Gastaka, J.R. Fernandez, M. Testillano, J. Bustamante,
M.J. Suarez, K. Aguirrebengoa, J. Goikoetxea, J. Ortiz de Urbina.

HOSP. CLINIC - IDIBAPS – U.B. (BARCELONA)

JM Miró, A. Rimola, A. Moreno, M. Laguno, F.Aguero, M. López-Dieguez, M. Tuset,
C. Cervera, M. Monras, J. Mallolas, J. Blanch, C. Lanaspá, E. de Lazzari, JM Gatell.

HOSP. UNIV. GREGORIO MARAÑÓN (MADRID)

R. Bañares, P. Miralles, M. Salcedo, J. Cosín, JC López Bernaldo
de Quirós, J. Berenguer

HOSP. UNIV. VIRGEN DEL ROCIO (SEVILLA)

ME Cordero, JM Cisneros et al.

SITES AND INVESTIGATORS (II)

HOSP. UNIV. LA FE (VALENCIA)

M. Prieto, M. Blanes et al.

HOSP. UNIV. REINA SOFIA (CORDOBA)

J. Torre-Cisneros, M. de la Mata, JJ Castón, S. Rufian, P. López, A. Rivero.

HOSP. UNIV. CENTRAL DE ASTURIAS (OVIEDO)

M. Rodriguez, I. González et al.

HOSP. UNIV. VIRGEN DE LA ARRIXACA (MURCIA)

JA Pons et al.

HOSP. CARLOS HAYA (MALAGA)

M. Jiménez, J. Rodrigo, A. De la Fuente, J. Santoyo et al.

HOSP. 12 DE OCTUBRE (MADRID)

F. Pulido, R. Rubio et al.

HOSP. UNIV. JUAN CANALEJO (LA CORUÑA)

F. Suárez, J.D. Pedreira et al.

HOSP. UNIV. MARQUES DE VALDECILLA (SANTANDER)

MC Fariñas et al.

HOSP. UNIV. SANTIAGO DE COMPOSTELA (LA CORUÑA)

A. Antela, M. Delgado, A. Prieto, S. Tome et al.

HOSP. CLINICO LOZANO BLESÁ (ZARAGOZA)

A. García-Gil, E. Tejero, S. Letona, R. Lozano et al.

ACKNOWLEDGEMENTS

- Fundación para la Investigación y Prevención del SIDA en España (FIPSE).
 - Grupo de Estudio de Sida (GESIDA/SEIMC).
 - Sociedad Española de Trasplante Hepático (SETH).
 - Grupo de Estudio de Infecciones en Trasplantados. (GESITRA/SEIMC).

 - Secretaria del Plan Nacional del Sida (SPNS) del Ministerio de Sanidad y Consumo (MSC).
 - Organización Nacional de Trasplante (ONT).
- Our patients.