

Continental Differences of HCC in HIV-Infected Patients. A Pilot Study Comparing North America & Europe

Eugenia Vispo¹, David E. Kaplan², Jorge Daruich³, Marina Nunez⁴, Martin Vogel⁵, Nicolás Merchante⁶, Manuel Márquez Molero⁷, Ziba Jalali⁸, Rafiullah⁹, Pablo Barreiro¹, Jürgen K. Rockstroh⁵, Stefan Mauss¹⁰, Norbert Bräu^{9,11}, Liver Cancer in HIV Study Group*

¹Enfermedades Infecciosas, Hospital Carlos III, Madrid, Spain. , ²Philadelphia VA Medical Center & University of Pennsylvania, Philadelphia, PA, United States , ³Sección de Hepatología, Universidad de Buenos Aires, Buenos Aires, Argentina , ⁴Division of Infectious Diseases, Wake Forest University, Winston-Salem, NC, United States., ⁵HIV-Ambulanz, Universitätsklinikum Bonn, Bonn, Germany , ⁶Unidad Clínica de Enfermedades Infecciosas, Hospital Universitario de Valme, Sevilla, Spain, ⁷Hospital Virgen de la Victoria, Málaga, Spain. ⁸Division of Infectious Diseases, University of Nebraska Medical Center, Omaha, NE, United States, ⁹Bronx VA Medical Center, Bronx, NY, United States, ¹⁰HIV Research, Düsseldorf Center for HIV & HepatoGastroenterology, Düsseldorf, Germany., ¹¹Divisions of Infectious Diseases and Liver Diseases, Mount Sinai School of Medicine, New York, NY, United States.

Background

- Cases of HCC in HIV-infected patients have been reported with increasing frequency.
- It is unknown if there are differences between continents.

Methods

- Retrospective analysis in 29 centers in 5 countries
 - North America (NA)** n=120
Canada and United States
 - Europe (EU)** n=28
Germany, Spain and United Kingdom
- All HCC cases in HIV-infected patients from 1995-2010 with data on initial presentation.
 - Diagnosis by AASLD criteria (Bruix & Sherman, Hepatology, 2005)

HCC Tumor Characteristics

	North America n=120	Europe n=28	P
Hepatic Lesions			
Solitary Tumors	59 (50%)	13 (46%)	0.76
Multiple Tumors/Diffusely Infiltrative Tumors	60 (50%)	15 (54%)	
Median Size Largest Lesion (cm), Range	4.2 (1.2-20)	4.0 (0.5-10.8)	0.42
Portal Vein Thrombosis	22 (19%)	4 (14%)	0.83
Extrahepatic Metastases	16 (13%)	6 (21%)	0.29
AFP level (ng/ml)			
Median	373.5	239	0.88
Normal (\leq ULN)	12 (11.4%)	2 (8.7%)	1.00

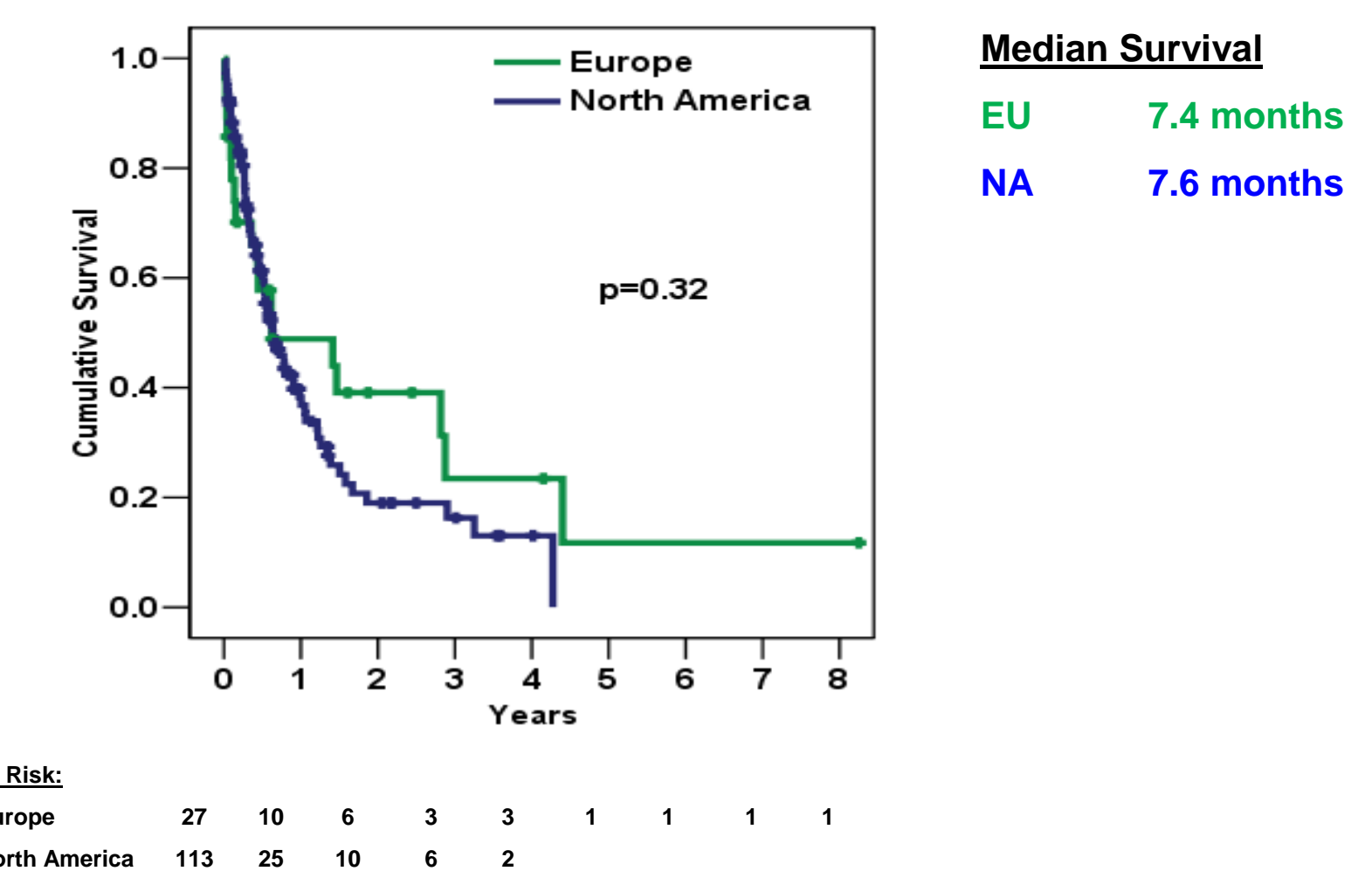
HCC Therapy

	North America n=120	Europe n=28	P
Potentially Curative Therapy	39 (32.5%)	8 (28.6%)	0.48
Radiofrequency Ablation (RFA)	21	1	
Ethanol Injections	6	3	
Surgical Resection	10	3	
Liver Transplantation	2	1	
Effective, Non-Curative Therapy	29 (24%)	9 (32%)	0.48
Transarterial Chemoembolization	21	7	
Sorafenib	8	2	
No Therapy	52 (43.3%)	11 (39.3%)	

HCC Staging

	North America n=120	Europe n=28	P
BCLC Stage, n (%)			
A	37 (31%)	6 (21%)	0.09
B	26 (22%)	7 (25%)	
C } Advanced,	43 (36%)	7 (25%)	
D } Incurable	13 (11%)	8 (29%)	
BCLC Stages C and D	56 (47%)	15 (54%)	0.53
CLIP Score, Mean \pm SD	1.89 (\pm 1.3)	1.96 (\pm 1.9)	0.82

Survival



Patient Characteristics

	North America n=120	Europe n=28	P
Age (yrs), Mean \pm SD	53.3	48.6	0.008
Male Sex	115 (96%)	26 (93%)	0.50
Time of HCC Diagnosis Date, Median	July-2003	April-2005	0.03
Etiology of HCC			
Chronic Hepatitis C	87 (72%)	21 (78%)	0.66
Chronic Hepatitis B	30 (25%)	6 (22%)	
Non-Viral (Alcohol, NASH)	3 (3%)	0	
Alcohol Consumption			
None/Moderate	66 (57%)	15 (68%)	0.34
Excessive	49 (43%)	7 (32%)	
Liver Function			
Child-Turcotte-Pugh Score, Mean	6.71	6.71	0.1
Stage A	66 (55.5%)	17 (60.7%)	0.17
Stage B	43 (36%)	6 (21%)	
Stage C	10 (8%)	5 (18%)	
HCC Diagnosed via Screening (AFP or Imaging)	57 (48%)	19 (68%)	0.057
HIV parameter, Mean			
CD4+ Cells (per mm ³)	337	308	0.53
Log ₁₀ HIV RNA Level	2.68	2.11	0.052
On HIV Therapy	85 (71%)	26 (93%)	0.015
Duration of HIV Therapy, Mean (yrs)	6.6	11.1	<0.001

Summary and Conclusion

- North American patients are older than European patients
- In NA patients, HCC tends to be detected less often through screening
- NA patients have slightly higher HIV viral loads than EU patients.
- NA patients receive HIV Therapy less frequently and shorter than EU patients.
- HCC staging, therapy, and survival are similar between the two continents.

To contribute your cases of HCC in HIV patients for further studies, please contact:
Norbert Bräu norbert.brau@va.gov Tel: (+1) 917-701-3867
or visit us at www.HCCinHIV.org

* This abstract is dedicated to **Edmund J. Bini, MD, MPH (1967–2010)** who contributed greatly to this study, and who would have been a co-author

