Emphysema association in a prospective series with patients suffering from Idiopathic Pulmonary Fibrosis.

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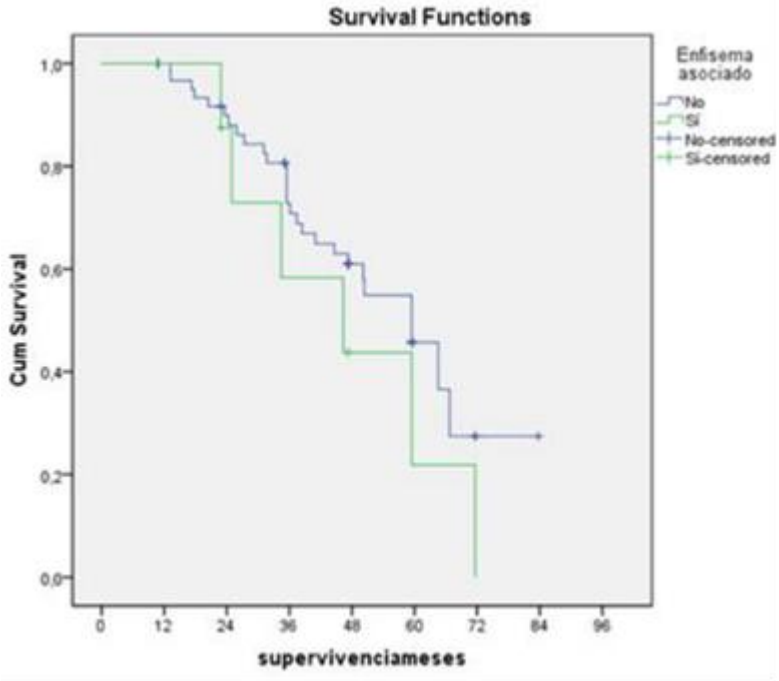
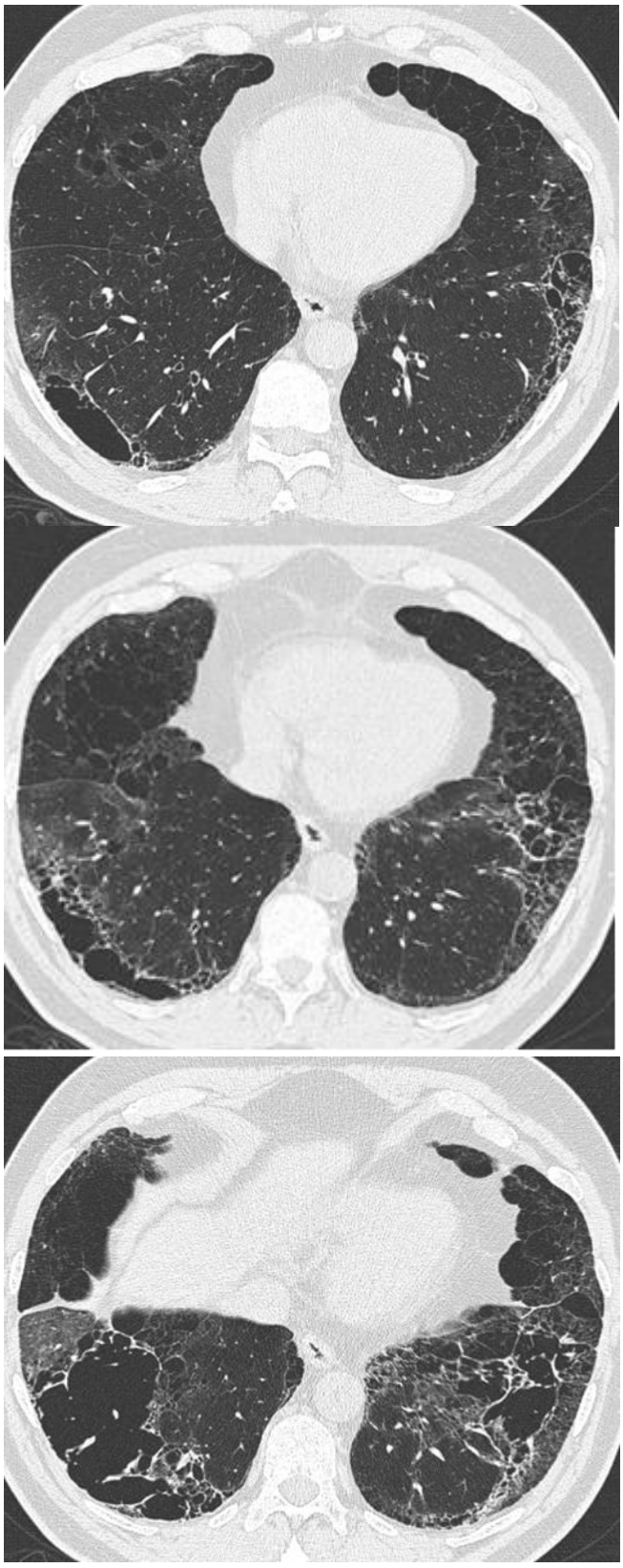
OBJECTIVE:
We aim to identify patients suffering from Idiopathic Pulmonary Fibrosis (IPF) and emphysema – within a prospective series of patients diagnosed with IPF – and to analyse their differential and survival characteristics.

METHOD:
Longitudinal prospective study which includes patients diagnosed with IPF for the period January 2005 - October 2011. Data collected:
-Demographic characteristics.
-Findings typical of emphysema in HRCT.
-Respiratory functional explorations during the moment of the diagnosis
-Deaths during the follow-up.

They were divided into two groups according to the presence or the absence of associated emphysema in the IPF patient.

Statistical analysis: Chi square test, Mann-Whitney U test and Kaplan-Meier survival probability curve.





Figures 1. (a,b,c). Involvement of both lower lobes consisting cystic, some larger than 3 cm, that shaped and arranged in zones subpleural honeycombing regarding fibrosis. Presence of bullae by subpleural emphysema. Also appreciate bronchial dilation in both lower lobes. CONCLUSION: fibrosis with associated emphysema and bronchiectasis.

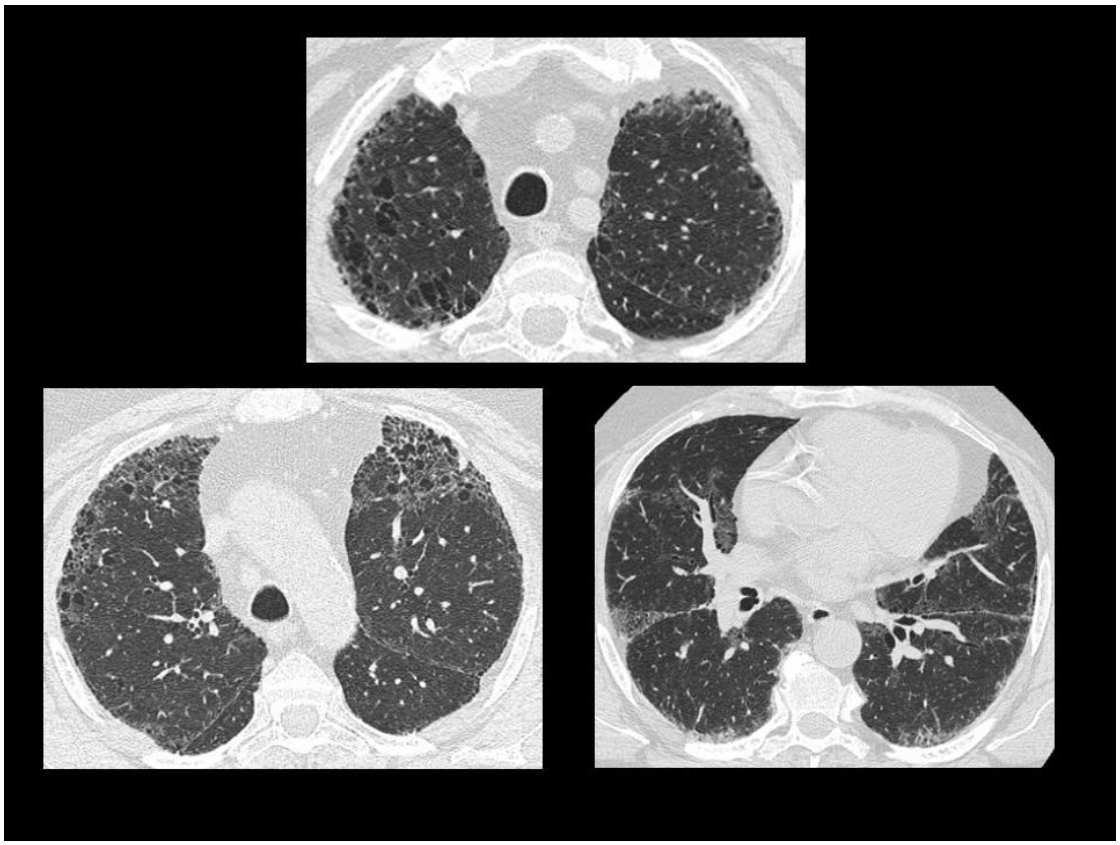


Figure 2: NIU changes were seen with thickened septa and abundant subpleural honeycombing and subcisural. It is also noteworthy the presence of some areas of high ground-glass density that could indicate inflammatory activity at this time.
Subpleural air cysts LLSS paraseptal representing emphysema.

RESULTS:

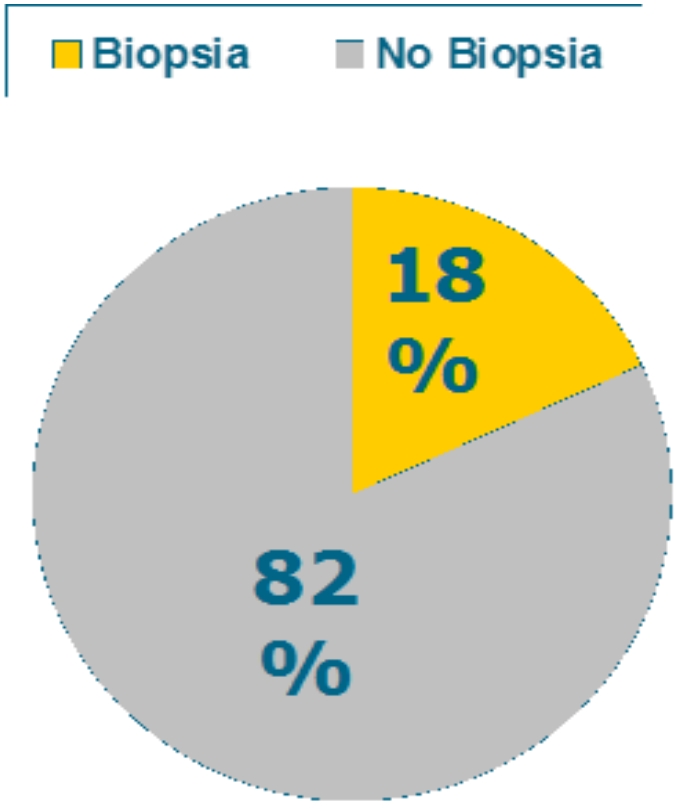
73 patients with IPF were included. 13 of them (18,1%) underwent a surgical biopsy in order to obtain diagnostic confirmation.

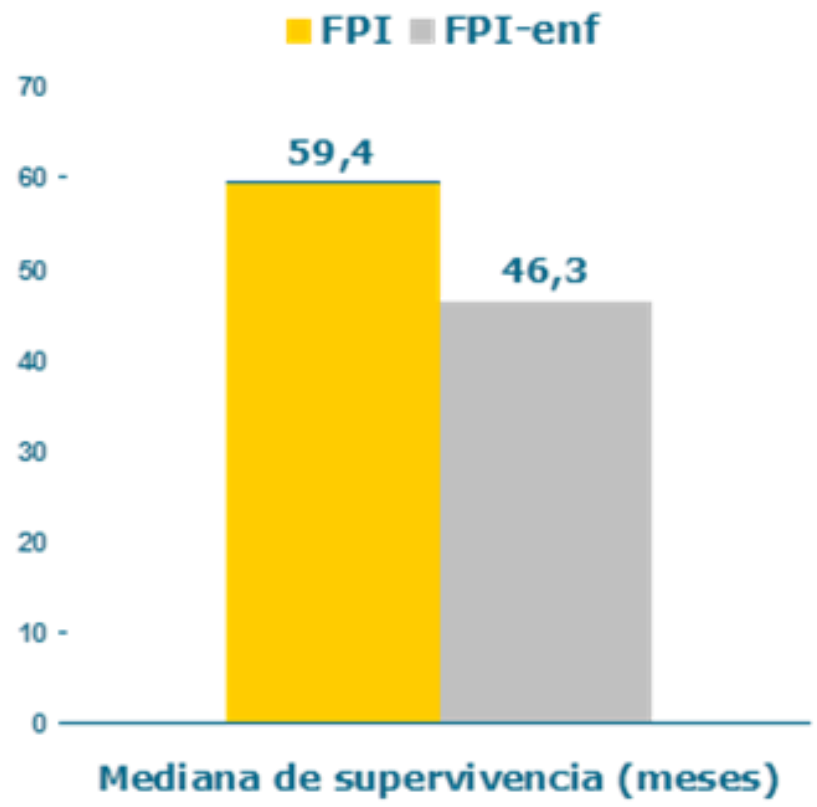
The average age was 73±9 years, 61,6% were men. 9 patients (12,3%) presented IPF-emphysema, all with a smoking history (p=0.002). No significant differences were found while performing pulmonary function tests, except for DLCO% (IPF:54±15 vs. IPF:39,7±13, p=0.035) and DLCO%/VA (IPF:89±22,5 vs. IPF-Enph.:64±15,6, p=0.005)

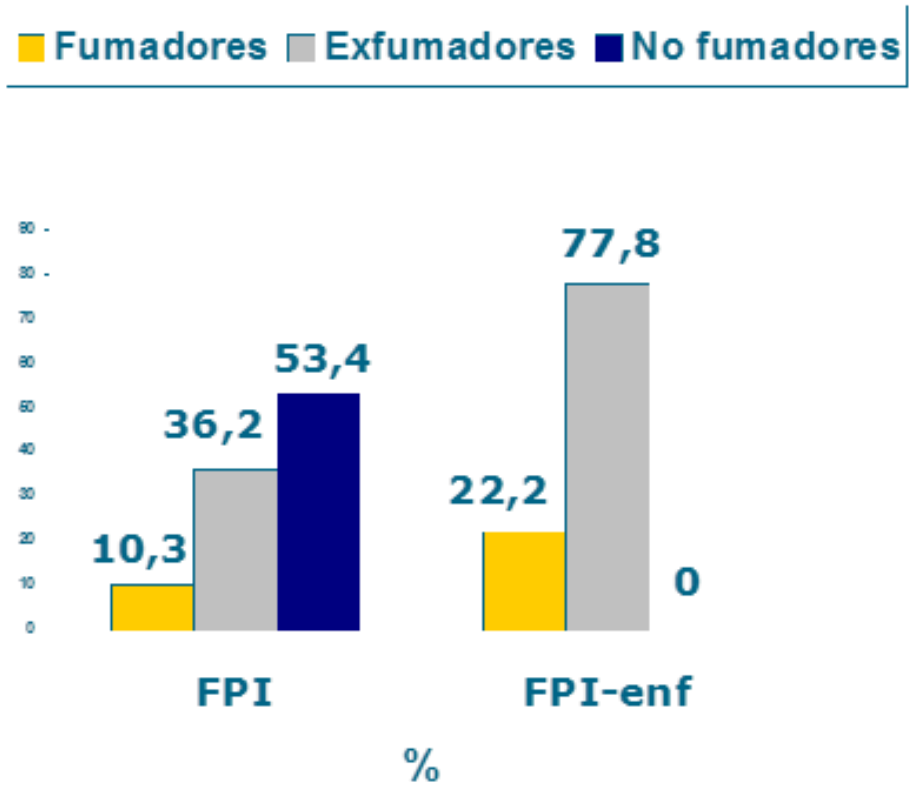
At the end of the follow-up, 34 patients had died (46,6%), 66,7% of them of IPF-Emph, contrasting with 33,3% who died of IPF, without significant differences (p=0.2).

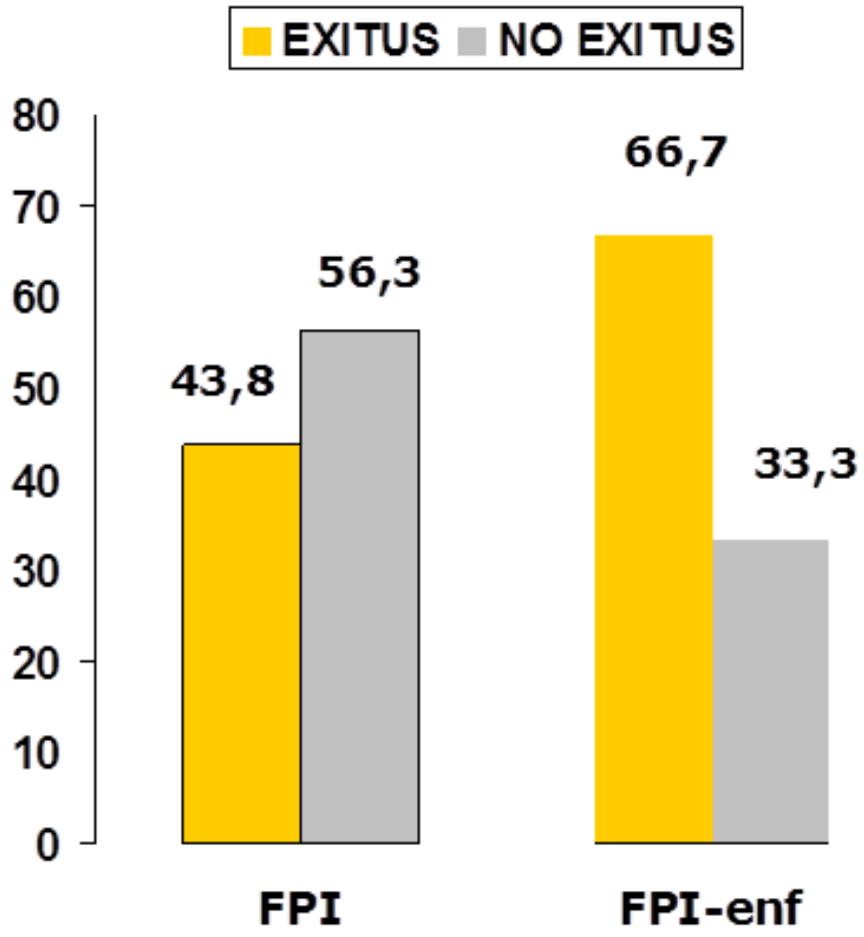
The average survival of the group was 41,9±17,8 months: 46,3±15,3 months (16,3-76,4 95% CI) for IPF-Emphysema and 59,4±5,2 (49,2-69,7 95% CI) for FPI (p=0.22).

Medias	FEV1 (%)	FVC (%)	Tiffenau (%)	DLCO (%)	D (A-a) O_2	CPI	Desat 6MM (%)
FPI	88.53	84.61	79.75	54.05	38.38	34.10	8.13
FPI-enf	87.13	86.63	77.63	39.71	46.52	43.00	8.17
p	0.856	0.770	0.414	0.018	0.388	0.153	0.989




FPI
FPI-enf
70
60
50
40
30
20
10
0
59,4
46,3
Mediana de supervivencia (meses)


Fumadores
Exfumadores
No fumadores
80
70
60
50
40
30
20
10
0
10,3
36,2
53,4
22,2
77,8
0
FPI
FPI-enf
%



CONCLUSIONS:

We detected in our group a small percentage of IPF-Emphysema, all of them with a tobacco habit. The only difference in the moment of the diagnosis was that DLCO% and DLCO/VA% were more affected in IPF-Emphysema patients, but so far we have not detected a minor survival of these patients.

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