Table S1. SNP frequencies in Non Melanocitic Skin Cancer Patients (NMSC) and Controls (CTRL) stratified according to 64 years Age cut off (adjusted by Gender)

Genes and SNP alleles		Age <64				Age ≥64			
		CTRL	NMSC	OR	*p*-value	CTRL	NMSC	OR	*p*-value:
		N (gen. freq.)		(95% CI)		N (gen. freq.)		(95% CI)	
TGF-β1 rs1800471	G/G	95 (0.84)	26 (0.76)	1.00	0..32	40 (0.83)	30 (0.83)	0.93 (0.29-3.08)	0.931
	C/G	16 (0.14)	7 (0.21)	1.60 (0.59-4.30)	0.38	6 (0.13)	4 (0.11)	0.84 (0.22-3.26)	0.797
	C/C	2 (0.02)	1 (0.03)	1.83 (0.16-20.9)	0.68	2 (0.4)	2 (0.06)	1.27 (0.17-9.65)	0.823
	C/*	18 (0.16)	8 (0.24)	1.62 (0.63-4.15)	0.32	8 (0.17)	35 (0.17)	1.00 (0.31-3.19)	0.931
TGF- β2 rs900	A/A	58 (0.51)	15 (0.44)	1.29 (0.59-2.83)	0.557	17 (0.35)	19 (0.53)	2.04 (0.84-4.93)	0.125
	A/T	46 (0.41)	12 (0.35)	0.82 (0.37-1.85)	0.643	26 (0.54)	14 (0.39)	0.48 (0.19-1.30)	0.191
	T/T	9 (0.08)	7 (0.21)	2.57 (0.86-7.69)	0.100	5 (0.11)	3 (0.08)	0.52 (0.11-2.53)	1.000
	T/*	53 (0.49)	19 (0.56)	0.76 (0.35-1.65)	0.557	31 (0.65)	17 (0.47)	0.49 (0.20-1.19)	0.125
TGF-β R1 rs334348	A/A	66 (0.58)	20 (0.59)	0.92 (0.42-2.03)	0.999	30 (0.63)	22 (0.61)	0.94 (0.39-2.29)	1.000
	A/G	37 (0.33)	10 (0.29)	0.85 (0.36-1.98)	0.699	15 (0.31)	12 (0.33)	1.04 (0.40-2.71)	0.993
	G/G	10 (0.09)	4 (0.12)	1.18 (0.34-4.14)	0.801	3 (0.07)	2 (0.06)	0.86 (0.13-5.68)	0.862
	G/*	47 (0.42)	14 (0.41)	3.30 (1.40-10.89)	0.999	18 (0.38)	14 (0.39)	1.06 (0.44-2.58)	1.000
TGF-β R1 rs334349	G/G	69 (0.61)	18 (0.53)	1.22 (0.55-2.70)	0.430	32 (0.67)	19 (0.53)	0.56 (0.23-1.36)	0.259
	G/A	35 (0.31)	13 (0.38)	1.24 (0.55-2.80)	0.613	13 (0.27)	12 (0.33)	1.53 (0.58-4.04)	0.566
	A/A	9 (0.08)	3 (0.09)	1.01 (0.25-4.04)	0.992	3 (0.06)	5 (0.14)	2.73 (0.58-12.8)	0.979
	A/*	44 (0.44)	16 (0.72)	0.71 (0.33-1.55)	0.430	16 (0.33)	17 (0.47)	1.79 (0.74-4.35)	0.259
TGF-β R2 rs4522809	A/A	42 (0.37)	23 (0.68)	3.54 (1.57-7.98)	0.0028	13 (0.27)	25 (0.69)	6.12 (2.36-15.9)	0.0002
	A/G	54 (0.48)	7 (0.20)	0.28 (011-0.71)	0.0053	24 (0.50)	7 (0.20)	0.15 (0.05-0.45)	0.0058
	G/G	17 (0.15)	4 (0.12)	1.22 (0.75-2.41)	0.784	11 (0.23)	4 (0.11)	0.42 (0.12-1.45)	0.249
	G/*	71 (0.63)	11 (0.32)	0.28 (0.12-0.64)	0.0028	35 (0.73)	11 (0.31)	0.16 (0.06-0.42)	0.0002
VEGF-A rs3025039	C/C	77 (0.68)	25 (0.74)	1.29 (0.55-3.06)	0.673	39 (0.81)	18 (0.50)	0.23 (0.09-0.61)	0.0042
	C/T	33 (0.29)	6 (0.17)	0.52 (0.19-1.37)	0.267	7 (0.15)	12 (0.33)	3.74 (1.23-11.33)	0.0058
	T/T	3 (0.03)	3 (0.09)	3.55 (0.70-18.5)	0.137	2 (0.04)	6 (0.17)	4.59 (0.87-24.33)	0.0632
	T/*	36 (0.32)	9 (0.26)	0.77 (0.33-1.82)	0.673	9 (0.19)	18 (0.50)	4.33 (1.63-11.5)	0.0042

Table S2. SNP frequencies in Non Melanocitic Skin Cancer Patients (NMSC) and Controls (CTRL) stratified according to Gender (adjusted by Age cut off)

Genes and SNP alleles		Female				Male			
		CTRL	MNSC	OR	*p*-value	CTRL	MNSC	OR	*p*-value:
		N (gen. freq.)		(95% CI)		N (gen. freq.)		(95% CI)	
TGF-β1 rs1800471	G/G	62 (0.79)	19 (0.79)	0.88 (0.27-2.92)	0. 876	73 (0.88)	37 (0.81)	1.84 (0.68-4.97)	0. 211
	C/G	14 (0.18)	4 (0.17)	0.90 (0.25-3.27)	0.889	8 (0.10)	7 (0.15)	1.76 (0.59-5.27)	0.333
	C/C	2 (0.03)	1 (0.04)	0.80 (0.06-10.89)	0.882	2 (0.02)	2 (0.04)	1.83 (0.25-13.61)	0.565
	C/*	16 (0.21)	5 (0.21)	1.00	0.876	10 (0.12)	9 (0.19)	1.78 (0.66-4.75)	0.211
TGF- β2 rs900	A/A	40 (0.51)	11 (0.46)	1.14 (0.43-2.99)	0.821	35 (0.42)	23 (0.50)	2.19 (0.75-6.44)	0.358
	A/T	32 (0.41)	11 (0.46)	1.19 (0.44-3.26)	0.923	40 (0.48)	15 (0.33)	0.53 (0.24-1.20)	0.114
	T/T	6 (0.8)	2 (0.8)	0.89 (0.14-5.62)	0.788	8 (0.09)	8 (0.17)	1.66 (0.54-5.14)	0.073
	T/*	38 (0.49)	13 (0.54)	0.81 (0.14-4.84)	0.821	48 (0.57)	35 (0.50)	0.71 (0.34-1.48)	0.358
TGF-β R1 rs334348	A/A	46 (0.59)	14 (0.59)	1.00	1.000	50 (0.60)	28 (0.61)	1.03 (0.49-2.19)	1.000
	A/G	27 (0.35)	8 (0.33)	0.79 (0.28-2.28)	0.739	25 (0.30)	14 (0.30)	1.04 (0.46-2.34)	1.000
	G/G	5 (0.06)	2 (0.08)	1.11 (0.17-7.11)	0.845	8 (0.10)	4 (0.09)	0.99 (0.27-3.74)	0.949
	G/*	32 (0.41)	10 (0.41)	1.00	1.000	33 (0.40)	18 (0.39)	0.99 (0.47-1.98)	1.000
TGF-β R1 rs334349	G/G	50 (0.64)	15 (0.62)	1.71 (0.34-8.56)	0.783	51 (0.62)	22 (0.48)	0.57 (0.28-1.19)	0.143
	G/A	23 (0.30)	6 (0.25)	0.72 (0.23-2.23)	0.691	25 (0.30)	19 (0.41)	1.63 (0.77-3.46)	0.246
	A/A	5 (0.06)	3 (0.13)	1.53 (0.29-8.03)	0.527	7 (0.08)	5 (0.11)	1.32 (0.39-4.44)	0.754
	A/*	50 (0.36)	9 (0.38)	0.87 (0.31-2.39)	0.785	32 (0.38)	24 (0.52)	1.74 (0.84-3.60)	0.143
TGF-β R2 rs4522809	A/A	31 (0.40)	17 (0.71)	3.68 (1.37-9.91)	0.011	24 (0.29)	31 (0.67)	5.08 (2.33-11.1)	0.0001
	A/G	37 (0.47)	4 (0.17)	0.22 (0.07-0.71)	0.008	41 (0.49)	10 (0.22)	0.28 (0.13-0.65)	0.003
	G/G	10 (0.13)	3 (0.12)	0.97 (0.24-3.86)	1.000	18 (0.22)	5 (0.11)	0.44 (0.15-1.28)	0.153
	G/*	47 (0.60)	7 (0.29)	0.27 (0.10-0.73)	0.011	59 (0.71)	15 (0.33)	0.20 (0.09-0.43)	0.0001
VEGF-A rs3025039	C/C	54 (0.69)	13 (0.54)	0.53 (0.21-1.34)	0.221	62 (0.75)	30 (0.65)	0.64 (0.29-1.39)	0.311
	C/T	22 (0.28)	8 (0.33)	1.27 (0.48-3.39)	0.618	18 (0.21)	10 (0.22)	1.03 (0.42-2.40)	1.00
	T/T	2 (0.03)	3 (0.13)	5.43 (0.85-34.7)	0.083	3 (0.04)	6 (0.13)	4.08 (0.95-16.8)	0.068
	T/*	24 (0.31)	11 (0.46)	1.90 (0.75-4.86)	0.221	21 (0.25)	16 (0.35)	1.57 (0.72-3.45)	0.311

C/*= C positive genotypes of *TGF-β1 rs1800471*G/C SNP; T/*= T positive genotypes of *TGF-β2 rs900*A/T SNP; G/*= G positive genotypes of *TGF-βR1 rs334348*A/G SNP; A/*= A positive genotypes of *TGF-βR1 rs334349*G/A SNP; G/*= G positive genotypes of *TGF-βR2 rs4522809*A/G SNP; T/*= T positive genotypes of *VEGF-A rs3025039*C/T SNP

Table S3. SNP frequencies in Non Melanocitic Skin Cancer Patients (NMSC) affected by basal cell carcinoma (BCC) compared to NMSC with squamous cell carcinoma (SCC) (adjusted by 64 years Age cut off and Gender)

Genes and SNP alleles		BCC		SCC		Controls		BCC Vs SCC		BCC Vs Controls		SCC Vs Controls	
		Nr	Freq.	Nr	Freq.	Nr	Freq.	OR 95% CI	*p* value	OR (95% CI)	*p* value	OR (95% CI)	*p* value
TGF-β1 rs1800471	G/G	41	0.82	15	0.75	135	0.84	0.66 0.19-2.28	0.522	0.888 0.38-2.02	0.828	0.58 0.19- 1.73	0.346
	C/G	8	0.16	3	0.15	22	0.14	0.90 0.21-3.98	0.788	1.37 0.55-3.44	0.723	1.35 0.35-5.13	0.311
	C/C	1	0.02	2	0.10	4	0.02	6.35 0.51-79.12	0.133	0.63 0.07-6.15	1.000	4.54 0.75-27.6	0.133
TGF- β2 rs900	A/A	26	0.52	8	0.40	75	0.47	0.62 0.22-1.76	0.410	1.24 0.66-2.34	0.521	0.76 0.29-1.97	0.639
	A/T	18	0.36	8	0.40	72	0.45	1.43 0.45-4.59	0.711	0.63 0.31-1.29	0.38	0.95 0.33-2.72	0.362
	T/T	6	0.12	4	0.20	14	0.09	1.89 0.41-8.76	0.523	1.11 0.37-3.30	0.580	2.55 0.67-9.73	0.119
TGF-β R1 rs334348	A/A	29	0.58	13	0.65	96	0.6	0.48 0.17-1.39	0.559	0.93 0.49-1.78	0.870	1.26 0.48-3.32	0.809
	A/G	16	0.32	6	0.30	52	0.32	0.85 0.27-2.69	0.911	1.07 0.52-2.20	0.83	0.87 0.31-2.44	0.839
	G/G	5	0.10	1	0.05	13	0.08	0.39 0.04-3.75	0.398	1.44 0.46-4.54	0.772	0.57 0.07-4.75	1.000
**TGF-β R1 rs334349*	G/G	29	0.58	8	0.40	101	0.63	0.48 0.17-1.39	0.158	0.82 0.43-1.57	0.618	0.39 0.15-1.02	0.057
	G/A	18	0.36	7	0.35	48	0.3	1.39 0.41-4.71	0.882	1.37 0.68-2.78	0.61	1.84 0.63-5.42	0.615
	A/A	3	0.06	5	0.25	12	0.07	7.09 1.31-38.48	0.019	0.81 0.21-3.18	1.000	5.48 1.52-19.7	0.044
***TGF-β R2 rs4522809*	A/A	33	0.66	15	0.75	55	0.34	1.54 0.48-4.98	0.444	3.74 1.91-7.31	0.0001	5.78 1.99-16.7	0.001
	A/G	12	0.24	2	0.10	78	0.48	0.35 0.07-1.81	0.145	0.24 0.11-0.52	0.0002	0.09 0.02-0.40	0.0004
	G/G	5	0.10	3	0.03	28	0.17	1.31 0.27-6.35	0.567	0.53 0.19-1.45	0.268	0.84 0.23-3.06	1.000
****VEGF-A rs3025039*	C/C	33	0.66	10	0.50	116	0.72	0.52 0.86-8.27	0.279	0.75 0.38-1.48	0.478	0.39 0.15-1.00	0.068
	C/T	10	0.20	8	0.40	40	0.25	2.67 1.00-13.00	0.129	0.99 0.44-2.23	0.091	2.59 0.94-7.17	0.085
	T/T	7	0.14	2	0.10	5	0.03	1.20 0.20-7.13	0.745	5.08 1.53-16.8	0.0085	4.89 0.82-29.1	0.074

* *rs334349*: SCC Vs BCC recessive model 6.20 (1.25-30.81) p=0.022; SCC Vs Controls recessive model 4.31 (1.32-14.08) p=0.024

** *rs4522809*: BCC Vs Controls dominant model 0.24 (0.12-0.49) p<0.0001; SCC Vs Controls dominant model 0.15 (0.05-0.45) p=0.0002

*** *rs3025039*: BCC Vs Controls recessive model 3.94 (1.15-13.49) p<0.0001; SCC Vs Controls dominant model 2.86 (1.09-7.50) p=0.034

Table S4. Analysis of frequencies of 31 pseudo-haplotype (p-Hp) containing major or minor alleles of *TGF-β* gene family and *VEGF-A* SNPs, in non-melanocytic skin cancer (NMSC) patients and controls (CTRL)

p-Hp	*TGF-β1 rs180047 1 G/C*	*TGF-β2 rs900 A/T*	*TGF-βR1 rs334348 A/G*	*TGF-βR1 rs334349 G/A*	*TGF-βR2 rs4522809 A/G*	*VEGF-A rs3025039 C/T*	CTRL	NMSC	OR (95%CI)	*p*
1	G	A	A	G	A	C	0.218	0.282	1.44 (0.76-2.73)	0.313
2	G	A	A	G	G	C	0.150	0.028	0.17 (0.04-0.73)	0.0061
3	G	T	A	G	G	C	0.106	0.047	0.33 (0.10-1.17)	0.0893
4	G	A	G	A	A	C	0.076	0.062	0.75 (0.23-2.42)	0.788
5	G	T	A	G	A	C	0.071	0.096	1.51 (0.56-4.09)	0.429
6	G	A	G	G	A	C	0.042	0.000	0.15 (0.01-2.60)	0.105
7	G	T	A	G	A	T	0.041	0.025	0.65 (0.13-3.20)	0.727
8	G	A	A	A	A	C	0.028	0.016	0.45 (0.05-3.94)	0.671
9	G	A	G	A	G	C	0.026	0.008	0.57 (0.06-5.18)	1.000
10	C	A	A	G	A	C	0.023	0.013	0.56 (0.06-5.19)	1.00
11	G	T	G	A	G	C	0.022	0.000	0.24 (0.01-4.67)	0.317
12	G	A	A	G	G	T	0.028	0.000	0.25 (0.01-4.68)	0.317
13	G	A	G	G	A	T	0.021	0.007	0.76 (0.08-7.47)	1.000
14	G	A	A	G	A	T	0.010	0.124	11.7 (2.46-55.9)	0.0005
15	G	T	A	A	G	C	0.010	0.015	1.15 (0.10-12.9)	1.000
16	G	T	G	A	G	T	0.010	0.016	1.15 (0.11-12.9)	1.000
17	C	A	A	G	A	T	0.010	0.007	0.45 (0.02-9.54)	1.000
18	C	A	A	G	G	C	0.015	0.000	0.46 (0.02-9.56)	1.000
19	C	A	A	G	G	T	0.012	0.000	0.45 (0.02-9.55)	1.000
20	G	T	G	G	G	C	0,011	0.000	0.45 (0.02-9.55)	1.000
21	C	A	A	A	G	C	0.005	0.021	2.33 (0.14-37.6)	0.515
22	G	A	A	A	G	T	0.008	0.015	2.32 (0.14-37.6)	0.515
23	G	A	G	G	G	C	0.000	0.020	6.97 (0.28-173)	0.303
24	G	T	G	A	A	C	0.000	0.058	21.8 (1.16-411)	0.0079
16	G	T	A	G	G	T	0.000	0.016	6.97 (0.28-173)	0.303
25	G	T	A	A	A	T	0.000	0.015	6.97 (0.28-173)	0.303
26	G	A	G	A	A	T	0.003	0.020	6.97 (0.28-173)	0.303
27	C	A	G	A	A	C	0.000	0.012	6.97 (0.28-173)	0.303
28	C	A	A	A	G	T	0.003	0.011	6.97 (0.28-173)	0.303
29	C	A	G	A	G	C	0.003	0.010	6.97 (0.28-173)	0.303
30	C	T	A	A	A	C	0.000	0.014	6.97 (0.28-173)	0.303
31	C	A	G	G	A	C	0.000	0.014	6.97 (0.28-173)	0.303