**Supplementary Tables**

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| **Supplementary Table 1.** Frequencies for HLA-A\* alleles in HP patients versus Controls | | | | | |
|  | HP  (N=40) | Controls  (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value† |
| A\*01 | 7(8.75%) | 12(8.57%) | 1.02 | 0.39 ; 2.71 | 0.96 |
| A\*02 | 28(35%) | 36(25.71%) | 1.56 | 0.86 ; 2.82 | 0.15 |
| A\*03 | 9(11.25%) | 10(7.14%) | 1.65 | 0.64 ; 4.24 | 0.30 |
| A\*11 | 7(8.75%) | 7(5%) | 1.82 | 0.62 ; 5.4 | 0.27 |
| A\*23 | 3(3.75%) | 7(5%) | 0.74 | 0.19 ; 2.95 | 0.67 |
| A\*24 | 8(10%) | 21(15%) | 0.63 | 0.27 ; 1.5 | 0.29 |
| A\*25 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*26 | 2(2.5%) | 4(2.86%) | 0.87 | 0.16 ; 4.87 | 1.00\* |
| A\*29 | 3(3.75%) | 4(2.86%) | 1.32 | 0.29 ; 6.07 | 0.71\* |
| A\*30 | 2(2.5%) | 6(4.29%) | 0.57 | 0.11 ; 2.91 | 0.71\* |
| A\*31 | 0(0%) | 5(3.57%) | 0.00 | -- | 0.16\* |
| A\*32 | 4(5%) | 7(5%) | 1.00 | 0.28 ; 3.53 | 1.00 |
| A\*33 | 2(2.5%) | 3(2.14%) | 1.17 | 0.19 ; 7.16 | 1.00\* |
| A\*34 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*66 | 0(0%) | 2(1.43%) | 0.00 | -- | 0.54\* |
| A\*68 | 4(5%) | 12(8.57%) | 0.56 | 0.17 ; 1.8 | 0.33 |
| A\*69 | 1(1.25%) | 1(0.71%) | 1.76 | 0.11 ; 28.52 | 1.00\* |
| A\*80 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 2.** Frequencies for HLA-B\* alleles in HP patients versus controls | | | | | |
|  | HP  (n=40) | Controls  (n=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value† |
| B\*07 | 6(7.5%) | 9(6.43%) | 1.18 | 0.4 ; 3.45 | 0.76 |
| B\*08 | 5(6.25%) | 8(5.71%) | 1.10 | 0.35 ; 3.48 | 0.87 |
| B\*13 | 1(1.25%) | 3(2.14%) | 0.58 | 0.06 ; 5.65 | 1.0\* |
| B\*14 | 7(8.75%) | 12(8.57%) | 1.02 | 0.39 ; 2.71 | 0.96 |
| B\*15 | 2(2.5%) | 14(10%) | 0.23 | 0.05 ; 1.04 | 0.06\* |
| B\*18 | 3(3.75%) | 10(7.14%) | 0.51 | 0.14 ; 1.9 | 0.38\* |
| B\*27 | 5(6.25%) | 3(2.14%) | 3.04 | 0.71 ; 13.09 | 0.14\* |
| B\*35 | 9(11.25%) | 12(8.57%) | 1.35 | 0.54 ; 3.36 | 0.52 |
| B\*38 | 1(1.25%) | 0(0%) | -- | -- | 0.36\* |
| B\*39 | 2(2.5%) | 1(0.71%) | 3.56 | 0.32 ; 39.94 | 0.30\* |
| B\*40 | 3(3.75%) | 6(4.29%) | 0.87 | 0.21 ; 3.58 | 1.00\* |
| B\*41 | 3(3.75%) | 2(1.43%) | 2.69 | 0.44 ; 16.44 | 0.36\* |
| B\*42 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| B\*44 | 14(17.5%) | 21(15%) | 1.20 | 0.57 ; 2.52 | 0.63 |
| B\*45 | 1(1.25%) | 0(0%) | -- | -- | 0.36\* |
| B\*49 | 1(1.25%) | 10(7.14%) | 0.16 | 0.02 ; 1.31 | 0.06\* |
| B\*50 | 2(2.5%) | 10(7.14%) | 0.33 | 0.07 ; 1.56 | 0.22\* |
| B\*51 | 8(10%) | 10(7.14%) | 1.44 | 0.55 ; 3.82 | 0.46 |
| B\*53 | 0(0%) | 2(1.43%) | 0.00 | -- | 0.54\* |
| B\*55 | 2(2.5%) | 0(0%) | -- | -- | 0.13\* |
| B\*57 | 2(2.5%) | 4(2.86%) | 0.87 | 0.16 ; 4.87 | 1.00\* |
| B\*58 | 3(3.75%) | 1(0.71%) | 5.42 | 0.55 ; 52.96 | 0.14\* |
| B\*67 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 3.** Frequencies for HLA-DRB1\* alleles in HP patients versus Controls | | | | | |
|  | HP  (n=40) | Controls  (n=70) | |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value† |
| DRB1\*01 | 8(10%) | 17(12.14%) | 0.80 | 0.33 ; 1.96 | 0.63 |
| DRB1\*03 | 11(13.75%) | 18(12.86%) | 1.08 | 0.48 ; 2.42 | 0.85 |
| DRB1\*04 | 9(11.25%) | 25(17.86%) | 0.58 | 0.26 ; 1.32 | 0.19 |
| DRB1\*07 | 10(12.5%) | 15(10.71%) | 1.19 | 0.51 ; 2.79 | 0.69 |
| DRB1\*08 | 4(5%) | 5(3.57%) | 1.42 | 0.37 ; 5.45 | 0.73\* |
| DRB1\*09 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| DRB1\*11 | 8(10%) | 17(12.14%) | 0.80 | 0.33 ; 1.96 | 0.63 |
| DRB1\*12 | 3(3.75%) | 0(0%) | -- | -- | 0.05\* |
| DRB1\*13 | 13(16.25%) | 28(20%) | 0.78 | 0.38 ; 1.6 | 0.49 |
| DRB1\*14 | 4(5%) | 1(0.71%) | 7.32 | 0.8 ; 66.63 | 0.06\* |
| DRB1\*15 | 6(7.5%) | 12(8.57%) | 0.86 | 0.31 ; 2.4 | 0.78 |
| DRB1\*16 | 4(5%) | 1(0.71%) | 7.32 | 0.8 ; 66.63 | 0.06\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 4.** Frequencies for HLA-A\* alleles in fibrotic HP patients versus controls | | | | | |
|  | Fibrotic (N=15) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value† |
| A\*01 | 4(13.33%) | 12(8.57%) | 1.64 | 0.49 ; 5.49 | 0.42 |
| A\*02 | 14(46.67%) | 36(25.71%) | 2.53 | 1.12 ; 5.69 | 0.02 |
| A\*03 | 2(6.67%) | 10(7.14%) | 0.93 | 0.19 ; 4.47 | 1.00\* |
| A\*11 | 3(10%) | 7(5%) | 2.11 | 0.51 ; 8.69 | 0.38\* |
| A\*23 | 1(3.33%) | 7(5%) | 0.66 | 0.08 ; 5.53 | 1.00\* |
| A\*24 | 1(3.33%) | 21(15%) | 0.20 | 0.03 ; 1.51 | 0.13\* |
| A\*25 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*26 | 0(0%) | 4(2.86%) | 0.00 | -- | 1.00\* |
| A\*29 | 1(3.33%) | 4(2.86%) | 1.17 | 0.13 ; 10.88 | 1.00\* |
| A\*30 | 1(3.33%) | 6(4.29%) | 0.77 | 0.09 ; 6.64 | 1.00\* |
| A\*31 | 0(0%) | 5(3.57%) | 0.00 | -- | 0.59\* |
| A\*32 | 0(0%) | 7(5%) | 0.00 | -- | 0.36\* |
| A\*33 | 1(3.33%) | 3(2.14%) | 1.57 | 0.16 ; 15.68 | 0.54\* |
| A\*34 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*66 | 0(0%) | 2(1.43%) | 0.00 | -- | 1.00\* |
| A\*68 | 2(6.67%) | 12(8.57%) | 0.76 | 0.16 ; 3.6 | 1.00\* |
| A\*69 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*80 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 5.** Frequencies for HLA-B\* alleles in fibrotic HP patients versus controls | | | | | |
|  | Fibrotic (N=15) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value † |
| B\*07 | 1(3.33%) | 9(6.43%) | 0.50 | 0.06 ; 4.12 | 1.00\* |
| B\*08 | 3(10%) | 8(5.71%) | 1.83 | 0.46 ; 7.36 | 0.41\* |
| B\*13 | 0(0%) | 3(2.14%) | 0.00 | -- | 1.00\* |
| B\*14 | 2(6.67%) | 12(8.57%) | 0.76 | 0.16 ; 3.6 | 1.00\* |
| B\*15 | 0(0%) | 14(10%) | 0.00 | -- | 0.13\* |
| B\*18 | 0(0%) | 10(7.14%) | 0.00 | -- | 0.21\* |
| B\*27 | 1(3.33%) | 3(2.14%) | 1.57 | 0.16 ; 15.68 | 0.54\* |
| B\*35 | 3(10%) | 12(8.57%) | 1.19 | 0.31 ; 4.49 | 0.73\* |
| B\*39 | 1(3.33%) | 1(0.71%) | 4.79 | 0.29 ; 78.87 | 0.32\* |
| B\*40 | 1(3.33%) | 6(4.29%) | 0.77 | 0.09 ; 6.64 | 1.00\* |
| B\*41 | 1(3.33%) | 2(1.43%) | 2.38 | 0.21 ; 27.13 | 0.44\* |
| B\*42 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| B\*44 | 8(26.67%) | 21(15%) | 2.06 | 0.81 ; 5.24 | 0.12 |
| B\*45 | 1(3.33%) | 0(0%) | -- | -- | 0.18 |
| B\*49 | 1(3.33%) | 10(7.14%) | 0.45 | 0.06 ; 3.64 | 0.69\* |
| B\*50 | 2(6.67%) | 10(7.14%) | 0.93 | 0.19 ; 4.47 | 1.00\* |
| B\*51 | 3(10%) | 10(7.14%) | 1.44 | 0.37 ; 5.6 | 0.70\* |
| B\*53 | 0(0%) | 2(1.43%) | 0.00 | -- | 1.00\* |
| B\*57 | 0(0%) | 4(2.86%) | 0.00 | -- | 1.00\* |
| B\*58 | 2(6.67%) | 1(0.71%) | 9.93 | 0.87 ; 113.3 | 0.08\* |
| B\*67 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 6.** Frequencies for HLA-DRB1\* alleles in fibrotic HP patients versus controls | | | | | |
|  | Fibrotic (N=15) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value † |
| DRB1\*01 | 3(10%) | 17(12.14%) | 0.80 | 0.22 ; 2.94 | 1.00\* |
| DRB1\*03 | 5(16.67%) | 18(12.86%) | 1.36 | 0.46 ; 3.99 | 0.58 |
| DRB1\*04 | 5(16.67%) | 25(17.86%) | 0.92 | 0.32 ; 2.64 | 0.88 |
| DRB1\*07 | 3(10%) | 15(10.71%) | 0.93 | 0.25 ; 3.42 | 1.00\* |
| DRB1\*08 | 1(3.33%) | 5(3.57%) | 0.93 | 0.1 ; 8.27 | 1.00\* |
| DRB1\*09 | 0(0%) | 1(0.71%) | 0.00 | 0 ; NaN | 1.00\* |
| DRB1\*11 | 2(6.67%) | 17(12.14%) | 0.52 | 0.11 ; 2.37 | 0.53\* |
| DRB1\*12 | 1(3.33%) | 0(0%) | Inf | NaN ; Inf | 0.18\* |
| DRB1\*13 | 4(13.33%) | 28(20%) | 0.62 | 0.2 ; 1.91 | 0.40 |
| DRB1\*14 | 3(10%) | 1(0.71%) | 15.44 | 1.55 ; 154.11 | 0.02\* |
| DRB1\*15 | 2(6.67%) | 12(8.57%) | 0.76 | 0.16 ; 3.6 | 1.00\* |
| DRB1\*16 | 1(3.33%) | 1(0.71%) | 4.79 | 0.29 ; 78.87 | 0.32\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 7.** Frequencies for HLA-A\* alleles in non fibrotic HP patients versus controls | | | | | |
|  | Non Fibrotic (N=25) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value † |
| A\*01 | 3(6%) | 12(8.57%) | 0.68 | 0.18 ; 2.52 | 0.76\* |
| A\*02 | 14(28%) | 36(25.71%) | 1.12 | 0.54 ; 2.32 | 0.85\* |
| A\*03 | 7(14%) | 10(7.14%) | 2.12 | 0.76 ; 5.9 | 0.15 |
| A\*11 | 4(8%) | 7(5%) | 1.65 | 0.46 ; 5.9 | 0.44 |
| A\*23 | 2(4%) | 7(5%) | 0.79 | 0.16 ; 3.94 | 1.00\* |
| A\*24 | 7(14%) | 21(15%) | 0.92 | 0.37 ; 2.32 | 0.86 |
| A\*25 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*26 | 2(4%) | 4(2.86%) | 1.42 | 0.25 ; 7.98 | 0.65\* |
| A\*29 | 2(4%) | 4(2.86%) | 1.42 | 0.25 ; 7.98 | 0.65\* |
| A\*30 | 1(2%) | 6(4.29%) | 0.46 | 0.05 ; 3.88 | 0.6\* |
| A\*31 | 0(0%) | 5(3.57%) | 0.00 | -- | 0.33\* |
| A\*32 | 4(8%) | 7(5%) | 1.65 | 0.46 ; 5.9 | 0.44 |
| A\*33 | 1(2%) | 3(2.14%) | 0.93 | 0.09 ; 9.17 | 1.00\* |
| A\*34 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| A\*66 | 0(0%) | 2(1.43%) | 0.00 | -- | 1.00\* |
| A\*68 | 2(4%) | 12(8.57%) | 0.44 | 0.1 ; 2.06 | 0.36\* |
| A\*69 | 1(2%) | 1(0.71%) | 2.84 | 0.17 ; 46.23 | 0.46\* |
| A\*80 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 8.** Frequencies for HLA-B\* alleles in non fibrotic HP patients versus controls | | | | | |
|  | Non Fibrotic (N=25) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value † |
| B\*07 | 5(10%) | 9(6.43%) | 1.62 | 0.51 ; 5.08 | 0.41 |
| B\*08 | 2(4%) | 8(5.71%) | 0.69 | 0.14 ; 3.35 | 1.00\* |
| B\*13 | 1(2%) | 3(2.14%) | 0.93 | 0.09 ; 9.17 | 1.00\* |
| B\*14 | 5(10%) | 12(8.57%) | 1.19 | 0.4 ; 3.55 | 0.76 |
| B\*15 | 2(4%) | 14(10%) | 0.38 | 0.08 ; 1.71 | 0.25\* |
| B\*18 | 3(6%) | 10(7.14%) | 0.83 | 0.22 ; 3.15 | 1.00\* |
| B\*27 | 4(8%) | 3(2.14%) | 3.97 | 0.86 ; 18.41 | 0.08\* |
| B\*35 | 6(12%) | 12(8.57%) | 1.45 | 0.52 ; 4.11 | 0.477 |
| B\*38 | 1(2%) | 0(0%) | -- | -- | 0.26\* |
| B\*39 | 1(2%) | 1(0.71%) | 2.84 | 0.17 ; 46.23 | 0.46\* |
| B\*40 | 2(4%) | 6(4.29%) | 0.93 | 0.18 ; 4.77 | 1.00\* |
| B\*41 | 2(4%) | 2(1.43%) | 2.88 | 0.39 ; 20.98 | 0.28\* |
| B\*42 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| B\*44 | 6(12%) | 21(15%) | 0.77 | 0.29 ; 2.04 | 0.60 |
| B\*49 | 0(0%) | 10(7.14%) | 0.00 | -- | 0.06\* |
| B\*50 | 0(0%) | 10(7.14%) | 0.00 | -- | 0.06\* |
| B\*51 | 5(10%) | 10(7.14%) | 1.44 | 0.47 ; 4.45 | 0.52 |
| B\*53 | 0(0%) | 2(1.43%) | 0.00 | -- | 1.00\* |
| B\*55 | 2(4%) | 0(0%) | -- | -- | 0.07\* |
| B\*57 | 2(4%) | 4(2.86%) | 1.42 | 0.25 ; 7.98 | 0.65\* |
| B\*58 | 1(2%) | 1(0.71%) | 2.84 | 0.17 ; 46.23 | 0.46\* |
| B\*67 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |

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| **Supplementary Table 9.** Frequencies for HLA-DRB1\* alleles in non fibrotic HP patients versus controls | | | | | |
|  | Non Fibrotic (N=25) | Controls (N=70) |  |  |  |
| allele | n(%) | n(%) | OR‡ | 95%CI | p value † |
| DRB1\*01 | 5(10%) | 17(12.14%) | 0.80 | 0.28 ; 2.31 | 0.68 |
| DRB1\*03 | 6(12%) | 18(12.86%) | 0.92 | 0.34 ; 2.48 | 0.8\* |
| DRB1\*04 | 4(8%) | 25(17.86%) | 0.40 | 0.13 ; 1.21 | 0.09 |
| DRB1\*07 | 7(14%) | 15(10.71%) | 1.36 | 0.52 ; 3.55 | 0.53 |
| DRB1\*08 | 3(6%) | 5(3.57%) | 1.72 | 0.4 ; 7.49 | 0.44\* |
| DRB1\*09 | 0(0%) | 1(0.71%) | 0.00 | -- | 1.00\* |
| DRB1\*11 | 6(12%) | 17(12.14%) | 0.99 | 0.37 ; 2.66 | 0.98 |
| DRB1\*12 | 2(4%) | 0(0%) | -- | -- | 0.07\* |
| DRB1\*13 | 9(18%) | 28(20%) | 0.88 | 0.38 ; 2.02 | 0.76 |
| DRB1\*14 | 1(2%) | 1(0.71%) | 2.84 | 0.17 ; 46.23 | 0.46\* |
| DRB1\*15 | 4(8%) | 12(8.57%) | 0.93 | 0.28 ; 3.02 | 0.90 |
| DRB1\*16 | 3(6%) | 1(0.71%) | 8.87 | 0.9 ; 87.37 | 0.06\* |
| N number of individuals  n(%) number of alleles (percentage)  OR odds ratio  95%CI 95% confidence interval  ‡ each allele (or genotype) was compared to the remaining alleles (or genotypes)  \* p-value for Fisher exact test  † p-value not corrected for multiple comparisons | | | | | |