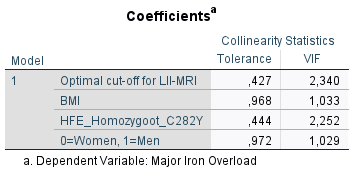
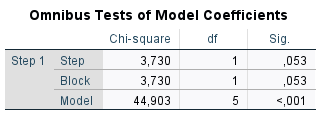
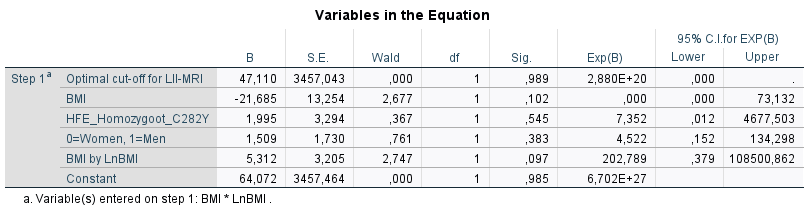
Supplement assumptions of logistic regression

**No multicollinearity**



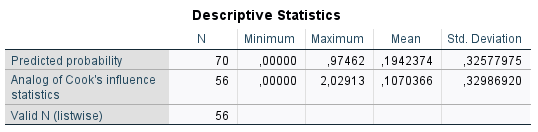
**Linearity**

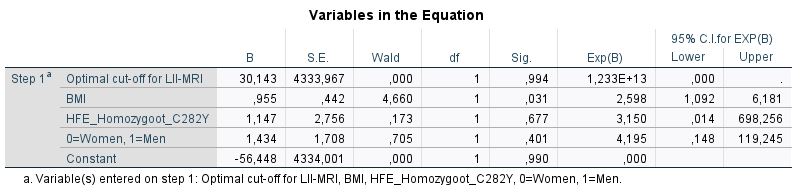




**No influential observations:**

Analysis without 1 observation with Cook’s distance above 1





Multiple imputation

No multicollinearity

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | |
| Imputation Number | Model | | Collinearity Statistics | |
| Tolerance | VIF |
| Original data | 1 | Optimal cut-off for LII-MRI | ,427 | 2,340 |
| BMI | ,968 | 1,033 |
| HFE\_Homozygoot\_C282Y | ,444 | 2,252 |
| 0=Women, 1=Men | ,972 | 1,029 |
| 1 | 1 | Optimal cut-off for LII-MRI | ,614 | 1,629 |
| BMI | ,945 | 1,059 |
| HFE\_Homozygoot\_C282Y | ,636 | 1,571 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 2 | 1 | Optimal cut-off for LII-MRI | ,634 | 1,577 |
| BMI | ,969 | 1,032 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,563 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 3 | 1 | Optimal cut-off for LII-MRI | ,622 | 1,607 |
| BMI | ,958 | 1,044 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 4 | 1 | Optimal cut-off for LII-MRI | ,624 | 1,602 |
| BMI | ,960 | 1,042 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,564 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 5 | 1 | Optimal cut-off for LII-MRI | ,607 | 1,646 |
| BMI | ,938 | 1,066 |
| HFE\_Homozygoot\_C282Y | ,633 | 1,579 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 6 | 1 | Optimal cut-off for LII-MRI | ,621 | 1,610 |
| BMI | ,956 | 1,047 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 7 | 1 | Optimal cut-off for LII-MRI | ,617 | 1,620 |
| BMI | ,950 | 1,053 |
| HFE\_Homozygoot\_C282Y | ,638 | 1,568 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 8 | 1 | Optimal cut-off for LII-MRI | ,621 | 1,610 |
| BMI | ,955 | 1,047 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 9 | 1 | Optimal cut-off for LII-MRI | ,602 | 1,660 |
| BMI | ,929 | 1,076 |
| HFE\_Homozygoot\_C282Y | ,631 | 1,584 |
| 0=Women, 1=Men | ,985 | 1,015 |
| 10 | 1 | Optimal cut-off for LII-MRI | ,611 | 1,638 |
| BMI | ,938 | 1,066 |
| HFE\_Homozygoot\_C282Y | ,636 | 1,573 |
| 0=Women, 1=Men | ,984 | 1,016 |
| 11 | 1 | Optimal cut-off for LII-MRI | ,619 | 1,614 |
| BMI | ,954 | 1,048 |
| HFE\_Homozygoot\_C282Y | ,638 | 1,567 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 12 | 1 | Optimal cut-off for LII-MRI | ,633 | 1,579 |
| BMI | ,968 | 1,033 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,563 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 13 | 1 | Optimal cut-off for LII-MRI | ,606 | 1,651 |
| BMI | ,937 | 1,067 |
| HFE\_Homozygoot\_C282Y | ,632 | 1,582 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 14 | 1 | Optimal cut-off for LII-MRI | ,623 | 1,604 |
| BMI | ,959 | 1,042 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 15 | 1 | Optimal cut-off for LII-MRI | ,628 | 1,592 |
| BMI | ,967 | 1,034 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,563 |
| 0=Women, 1=Men | ,989 | 1,011 |
| 16 | 1 | Optimal cut-off for LII-MRI | ,635 | 1,575 |
| BMI | ,969 | 1,032 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,563 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 17 | 1 | Optimal cut-off for LII-MRI | ,600 | 1,667 |
| BMI | ,926 | 1,080 |
| HFE\_Homozygoot\_C282Y | ,630 | 1,588 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 18 | 1 | Optimal cut-off for LII-MRI | ,623 | 1,604 |
| BMI | ,960 | 1,042 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 19 | 1 | Optimal cut-off for LII-MRI | ,614 | 1,628 |
| BMI | ,948 | 1,055 |
| HFE\_Homozygoot\_C282Y | ,636 | 1,572 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 20 | 1 | Optimal cut-off for LII-MRI | ,602 | 1,662 |
| BMI | ,931 | 1,074 |
| HFE\_Homozygoot\_C282Y | ,630 | 1,587 |
| 0=Women, 1=Men | ,988 | 1,012 |
| 21 | 1 | Optimal cut-off for LII-MRI | ,621 | 1,609 |
| BMI | ,955 | 1,047 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 22 | 1 | Optimal cut-off for LII-MRI | ,618 | 1,617 |
| BMI | ,955 | 1,047 |
| HFE\_Homozygoot\_C282Y | ,637 | 1,569 |
| 0=Women, 1=Men | ,989 | 1,011 |
| 23 | 1 | Optimal cut-off for LII-MRI | ,629 | 1,589 |
| BMI | ,965 | 1,036 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,562 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 24 | 1 | Optimal cut-off for LII-MRI | ,609 | 1,641 |
| BMI | ,939 | 1,065 |
| HFE\_Homozygoot\_C282Y | ,635 | 1,576 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 25 | 1 | Optimal cut-off for LII-MRI | ,614 | 1,630 |
| BMI | ,945 | 1,059 |
| HFE\_Homozygoot\_C282Y | ,636 | 1,571 |
| 0=Women, 1=Men | ,986 | 1,014 |
| 26 | 1 | Optimal cut-off for LII-MRI | ,589 | 1,699 |
| BMI | ,913 | 1,095 |
| HFE\_Homozygoot\_C282Y | ,620 | 1,612 |
| 0=Women, 1=Men | ,989 | 1,011 |
| 27 | 1 | Optimal cut-off for LII-MRI | ,609 | 1,642 |
| BMI | ,942 | 1,061 |
| HFE\_Homozygoot\_C282Y | ,634 | 1,578 |
| 0=Women, 1=Men | ,989 | 1,012 |
| 28 | 1 | Optimal cut-off for LII-MRI | ,630 | 1,587 |
| BMI | ,969 | 1,032 |
| HFE\_Homozygoot\_C282Y | ,640 | 1,562 |
| 0=Women, 1=Men | ,989 | 1,011 |
| 29 | 1 | Optimal cut-off for LII-MRI | ,621 | 1,611 |
| BMI | ,955 | 1,047 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,566 |
| 0=Women, 1=Men | ,987 | 1,013 |
| 30 | 1 | Optimal cut-off for LII-MRI | ,623 | 1,606 |
| BMI | ,959 | 1,043 |
| HFE\_Homozygoot\_C282Y | ,639 | 1,565 |
| 0=Women, 1=Men | ,988 | 1,012 |
| a. Dependent Variable: Major Iron Overload | | | | |

Linearity

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Classification Tablea** | | | | | | |
| Imputation Number | | Observed | | Predicted | | |
| Major Iron Overload | | Percentage Correct |
| ,00 | 1,00 |
| Original data | Step 1 | Major Iron Overload | ,00 | 42 | 1 | 97,7 |
| 1,00 | 0 | 13 | 100,0 |
| Overall Percentage | |  |  | 98,2 |
| 1 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 4 | 11 | 73,3 |
| Overall Percentage | |  |  | 90,3 |
| 2 | Step 1 | Major Iron Overload | ,00 | 51 | 4 | 92,7 |
| 1,00 | 6 | 11 | 64,7 |
| Overall Percentage | |  |  | 86,1 |
| 3 | Step 1 | Major Iron Overload | ,00 | 50 | 5 | 90,9 |
| 1,00 | 4 | 13 | 76,5 |
| Overall Percentage | |  |  | 87,5 |
| 4 | Step 1 | Major Iron Overload | ,00 | 49 | 5 | 90,7 |
| 1,00 | 6 | 12 | 66,7 |
| Overall Percentage | |  |  | 84,7 |
| 5 | Step 1 | Major Iron Overload | ,00 | 51 | 4 | 92,7 |
| 1,00 | 6 | 11 | 64,7 |
| Overall Percentage | |  |  | 86,1 |
| 6 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 5 | 10 | 66,7 |
| Overall Percentage | |  |  | 88,9 |
| 7 | Step 1 | Major Iron Overload | ,00 | 53 | 3 | 94,6 |
| 1,00 | 5 | 11 | 68,8 |
| Overall Percentage | |  |  | 88,9 |
| 8 | Step 1 | Major Iron Overload | ,00 | 55 | 3 | 94,8 |
| 1,00 | 2 | 12 | 85,7 |
| Overall Percentage | |  |  | 93,1 |
| 9 | Step 1 | Major Iron Overload | ,00 | 55 | 3 | 94,8 |
| 1,00 | 3 | 11 | 78,6 |
| Overall Percentage | |  |  | 91,7 |
| 10 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 3 | 12 | 80,0 |
| Overall Percentage | |  |  | 91,7 |
| 11 | Step 1 | Major Iron Overload | ,00 | 53 | 3 | 94,6 |
| 1,00 | 6 | 10 | 62,5 |
| Overall Percentage | |  |  | 87,5 |
| 12 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 4 | 11 | 73,3 |
| Overall Percentage | |  |  | 90,3 |
| 13 | Step 1 | Major Iron Overload | ,00 | 52 | 2 | 96,3 |
| 1,00 | 6 | 12 | 66,7 |
| Overall Percentage | |  |  | 88,9 |
| 14 | Step 1 | Major Iron Overload | ,00 | 55 | 2 | 96,5 |
| 1,00 | 5 | 10 | 66,7 |
| Overall Percentage | |  |  | 90,3 |
| 15 | Step 1 | Major Iron Overload | ,00 | 55 | 3 | 94,8 |
| 1,00 | 3 | 11 | 78,6 |
| Overall Percentage | |  |  | 91,7 |
| 16 | Step 1 | Major Iron Overload | ,00 | 51 | 4 | 92,7 |
| 1,00 | 6 | 11 | 64,7 |
| Overall Percentage | |  |  | 86,1 |
| 17 | Step 1 | Major Iron Overload | ,00 | 51 | 5 | 91,1 |
| 1,00 | 5 | 11 | 68,8 |
| Overall Percentage | |  |  | 86,1 |
| 18 | Step 1 | Major Iron Overload | ,00 | 53 | 4 | 93,0 |
| 1,00 | 4 | 11 | 73,3 |
| Overall Percentage | |  |  | 88,9 |
| 19 | Step 1 | Major Iron Overload | ,00 | 52 | 2 | 96,3 |
| 1,00 | 7 | 11 | 61,1 |
| Overall Percentage | |  |  | 87,5 |
| 20 | Step 1 | Major Iron Overload | ,00 | 52 | 3 | 94,5 |
| 1,00 | 6 | 11 | 64,7 |
| Overall Percentage | |  |  | 87,5 |
| 21 | Step 1 | Major Iron Overload | ,00 | 48 | 5 | 90,6 |
| 1,00 | 8 | 11 | 57,9 |
| Overall Percentage | |  |  | 81,9 |
| 22 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 4 | 11 | 73,3 |
| Overall Percentage | |  |  | 90,3 |
| 23 | Step 1 | Major Iron Overload | ,00 | 53 | 3 | 94,6 |
| 1,00 | 6 | 10 | 62,5 |
| Overall Percentage | |  |  | 87,5 |
| 24 | Step 1 | Major Iron Overload | ,00 | 54 | 2 | 96,4 |
| 1,00 | 4 | 12 | 75,0 |
| Overall Percentage | |  |  | 91,7 |
| 25 | Step 1 | Major Iron Overload | ,00 | 51 | 5 | 91,1 |
| 1,00 | 5 | 11 | 68,8 |
| Overall Percentage | |  |  | 86,1 |
| 26 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 3 | 12 | 80,0 |
| Overall Percentage | |  |  | 91,7 |
| 27 | Step 1 | Major Iron Overload | ,00 | 48 | 8 | 85,7 |
| 1,00 | 3 | 13 | 81,3 |
| Overall Percentage | |  |  | 84,7 |
| 28 | Step 1 | Major Iron Overload | ,00 | 49 | 6 | 89,1 |
| 1,00 | 6 | 11 | 64,7 |
| Overall Percentage | |  |  | 83,3 |
| 29 | Step 1 | Major Iron Overload | ,00 | 48 | 5 | 90,6 |
| 1,00 | 8 | 11 | 57,9 |
| Overall Percentage | |  |  | 81,9 |
| 30 | Step 1 | Major Iron Overload | ,00 | 54 | 3 | 94,7 |
| 1,00 | 4 | 11 | 73,3 |
| Overall Percentage | |  |  | 90,3 |
| a. The cut value is ,500 | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pooled | Step 1a | Optimal cut-off for LII-MRI | 2,835 | 1,318 |  |  | ,032 | 17,033 | 1,271 | 228,342 |
| BMI | 2,307 | 3,614 |  |  | ,523 | 10,049 | ,008 | 12009,536 |
| HFE\_Homozygoot\_C282Y | 1,348 | 1,071 |  |  | ,209 | 3,848 | ,469 | 31,597 |
| 0=Women, 1=Men | ,865 | 1,014 |  |  | ,394 | 2,375 | ,325 | 17,366 |
| BMI by LnBMI | -,497 | ,839 |  |  | ,554 | ,608 | ,117 | 3,154 |
| Constant | -21,991 | 22,818 |  |  | ,335 | ,000 | ,000 | 7568232175,577 |