test2

## Loading required package: magrittr

## [1] "Number of subjects with clnical data: 209"

## [1] "Number of male subjects with clinical data: 108"

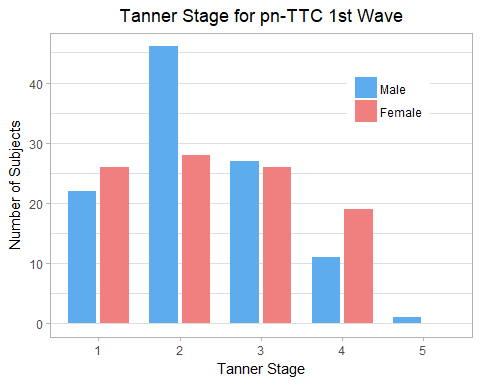
## [1] "Number of female subjects with clinical data: 101"

## [1] "Number of subjects with Tanner stage data: 206"

## [1] "Number of male subjects with Tanner stage data: 107"

## [1] "Number of female subjects with Tanner stage data: 99"

ggplot(as.data.frame(with(TS\_data, table(W1\_Tanner\_Stage = factor(W1\_Tanner\_Stage), Sex))),aes(factor(W1\_Tanner\_Stage), y = Freq, fill = Sex)) +  
 geom\_col(width=0.7, position = position\_dodge(width=0.8)) +   
 scale\_fill\_manual(name=NULL,labels=c("Male","Female"),values=c("steelblue2","lightcoral"),drop=FALSE) +  
 ggtitle("Tanner Stage for pn-TTC 1st Wave") +  
 xlab("Tanner Stage") +  
 ylab("Number of Subjects") +  
 theme\_light()+  
 theme(plot.title = element\_text(hjust = 0.5),legend.justification=c(1,1), legend.position=c(0.9,0.9),panel.grid.major.x=element\_blank())



knitr::kable(clinical\_data)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ID\_pnTTC | W1\_Age\_at\_MRI | Sex | Sibling | First\_Child | W1\_IQ | W1\_SDQ\_pb | W1\_Tanner\_Stage |
| 1 | 1 | 3823 | 2 | 0 | 1 | 108.6 | 4 | 2 |
| 4 | 4 | 3877 | 2 | 1 | 1 | 109.1 | 7 | 2 |
| 6 | 6 | 3943 | 2 | 1 | 0 | 99.2 | 6 | 3 |
| 7 | 7 | 3978 | 1 | 1 | 0 | 95.9 | 5 | 2 |
| 8 | 8 | 3954 | 2 | 1 | 1 | 105.2 | 4 | 1 |
| 9 | 9 | 3960 | 1 | 1 | 1 | 80.7 | 9 | 3 |
| 10 | 10 | 3974 | 2 | 1 | 1 | 117.2 | 7 | 1 |
| 11 | 11 | 4024 | 2 | 1 | 1 | 107.2 | 4 | 1 |
| 14 | 14 | 4073 | 2 | 1 | 1 | 123.1 | 7 | 3 |
| 15 | 15 | 3994 | 1 | 0 | 1 | 123.1 | 5 | 1 |
| 19 | 19 | 4205 | 1 | 1 | 0 | 101.9 | 5 | NA |
| 20 | 20 | 3912 | 1 | 1 | 0 | 105.9 | 7 | 2 |
| 21 | 21 | 3946 | 2 | 0 | 1 | 101.9 | 5 | 3 |
| 23 | 23 | 4044 | 1 | 1 | 1 | 102.6 | 5 | 1 |
| 26 | 26 | 3951 | 1 | 1 | 1 | 105.9 | 7 | 1 |
| 28 | 28 | 4047 | 1 | 1 | 1 | 89.3 | 5 | 1 |
| 29 | 29 | 3967 | 2 | 0 | 1 | 115.9 | 7 | 2 |
| 30 | 30 | 4170 | 2 | 1 | 1 | 91.3 | 5 | 1 |
| 32 | 32 | 4036 | 2 | 1 | 0 | 122.5 | 7 | 3 |
| 35 | 35 | 4045 | 2 | 1 | 0 | 108.5 | 9 | 1 |
| 37 | 37 | 4114 | 2 | 1 | 0 | 108.5 | 10 | 4 |
| 40 | 40 | 4187 | 2 | 1 | 1 | 97.3 | 7 | NA |
| 43 | 43 | 4141 | 1 | 1 | 1 | 103.2 | 5 | 2 |
| 44 | 44 | 4089 | 1 | 1 | 0 | 90.7 | 5 | 3 |
| 45 | 45 | 4190 | 1 | 0 | 1 | 104.6 | 4 | 1 |
| 46 | 46 | 4202 | 2 | 1 | 0 | 130.4 | 7 | 3 |
| 47 | 47 | 4195 | 2 | 1 | 0 | 105.2 | 10 | 1 |
| 48 | 48 | 4106 | 2 | 1 | 0 | 102.6 | 10 | 1 |
| 49 | 49 | 4071 | 2 | 1 | 0 | 109.2 | 7 | 3 |
| 50 | 50 | 4205 | 2 | 1 | 1 | 103.3 | 9 | 1 |
| 51 | 51 | 4098 | 1 | 1 | 0 | 99.9 | 5 | 1 |
| 52 | 52 | 4105 | 2 | 0 | 1 | 110.5 | 4 | 3 |
| 53 | 53 | 4170 | 2 | 0 | 1 | 119.8 | 5 | 3 |
| 55 | 55 | 4175 | 2 | 0 | 1 | 116.5 | 6 | 1 |
| 57 | 57 | 4179 | 2 | 1 | 0 | 126.4 | 8 | 1 |
| 60 | 60 | 4017 | 1 | 1 | 0 | 109.2 | 6 | 1 |
| 61 | 61 | 4126 | 1 | 0 | 1 | 101.9 | 7 | 1 |
| 62 | 62 | 4227 | 1 | 1 | 0 | 90.6 | 8 | 1 |
| 64 | 64 | 4121 | 1 | 1 | 0 | 127.7 | 6 | 2 |
| 65 | 65 | 4124 | 1 | 1 | 0 | 120.4 | 9 | 3 |
| 66 | 66 | 4159 | 2 | 1 | 1 | 94.6 | 5 | 2 |
| 67 | 67 | 4132 | 2 | 1 | 0 | 108.5 | 7 | 3 |
| 68 | 68 | 4129 | 1 | 1 | 1 | 105.2 | 4 | 2 |
| 69 | 69 | 4146 | 2 | 1 | 0 | 92.0 | 8 | 1 |
| 70 | 70 | 4293 | 2 | 1 | 0 | 99.9 | 10 | 2 |
| 71 | 71 | 4142 | 1 | 1 | 0 | 90.0 | 4 | 2 |
| 72 | 72 | 4202 | 2 | 1 | 0 | 101.2 | 7 | 4 |
| 74 | 74 | 4276 | 2 | 1 | 1 | 107.9 | 9 | 4 |
| 76 | 76 | 4144 | 2 | 0 | 1 | 102.6 | 7 | 3 |
| 79 | 79 | 4298 | 2 | 1 | 1 | 88.7 | 6 | 1 |
| 81 | 81 | 3890 | 2 | 1 | 1 | 111.9 | 10 | 2 |
| 84 | 84 | 4332 | 1 | 1 | 0 | 77.4 | 9 | 3 |
| 85 | 85 | 3952 | 1 | 1 | 1 | 109.2 | 10 | 3 |
| 86 | 86 | 4199 | 2 | 1 | 0 | 109.2 | 6 | 1 |
| 87 | 87 | 4210 | 2 | 0 | 1 | 123.8 | 5 | 2 |
| 88 | 88 | 4277 | 2 | 0 | 1 | 93.3 | 5 | 4 |
| 89 | 89 | 3885 | 1 | 0 | 1 | 109.2 | 8 | 4 |
| 90 | 90 | 4329 | 1 | 0 | 1 | 115.2 | 6 | 2 |
| 91 | 91 | 4044 | 2 | 1 | 1 | 117.9 | 6 | 1 |
| 93 | 93 | 3979 | 1 | 1 | 1 | 107.2 | 4 | 2 |
| 95 | 95 | 4024 | 1 | 1 | 0 | 95.9 | 8 | 2 |
| 97 | 97 | 4077 | 2 | 1 | 0 | 113.2 | 10 | 1 |
| 98 | 98 | 4467 | 1 | 1 | 0 | 86.7 | 9 | 3 |
| 99 | 99 | 4056 | 1 | 1 | 0 | 101.9 | 7 | 2 |
| 100 | 100 | 4056 | 2 | 0 | 1 | 116.5 | 9 | 2 |
| 101 | 101 | 4320 | 1 | 1 | 0 | 97.2 | 5 | 2 |
| 102 | 102 | 4135 | 2 | 1 | 0 | 101.3 | 10 | 2 |
| 104 | 104 | 3999 | 1 | 1 | 0 | 122.4 | 6 | 1 |
| 105 | 105 | 3983 | 1 | 1 | 1 | 127.1 | 0 | 3 |
| 107 | 107 | 4262 | 2 | 0 | 1 | 85.4 | 8 | 3 |
| 108 | 108 | 4003 | 1 | 1 | 0 | 111.2 | 10 | 1 |
| 110 | 110 | 4157 | 1 | 1 | 0 | 105.3 | 9 | 2 |
| 111 | 111 | 4146 | 2 | 1 | 1 | 111.2 | 8 | 3 |
| 112 | 112 | 4371 | 1 | 1 | 1 | 101.9 | 7 | 2 |
| 113 | 113 | 4055 | 2 | 1 | 1 | 98.6 | 9 | 3 |
| 115 | 115 | 4181 | 2 | 1 | 0 | 85.4 | 5 | 2 |
| 116 | 116 | 4202 | 1 | 1 | 0 | 105.2 | 6 | 4 |
| 119 | 119 | 4164 | 1 | 1 | 0 | 78.7 | 3 | 1 |
| 123 | 123 | 4000 | 2 | 0 | 1 | 103.9 | 5 | 2 |
| 124 | 124 | 4168 | 2 | 1 | 1 | 138.3 | 3 | 2 |
| 129 | 129 | 4115 | 2 | 0 | 1 | 102.0 | 6 | 4 |
| 130 | 130 | 4165 | 1 | 1 | 0 | 99.9 | 8 | 2 |
| 131 | 131 | 4008 | 2 | 1 | 1 | 109.2 | 7 | 2 |
| 132 | 132 | 4183 | 1 | 1 | 1 | 138.3 | 6 | 1 |
| 133 | 133 | 4043 | 2 | 1 | 0 | 93.3 | 9 | 2 |
| 136 | 136 | 3996 | 1 | 0 | 1 | 125.7 | 10 | 2 |
| 137 | 137 | 4197 | 1 | 0 | 1 | 109.2 | 6 | 3 |
| 138 | 138 | 4112 | 1 | 1 | 0 | 104.6 | 8 | 1 |
| 139 | 139 | 4092 | 1 | 1 | 0 | 105.2 | 10 | 2 |
| 140 | 140 | 4131 | 2 | 0 | 1 | 105.9 | 7 | 3 |
| 142 | 142 | 4031 | 1 | 1 | 0 | 103.2 | 6 | 2 |
| 143 | 143 | 4137 | 1 | 1 | 0 | 114.5 | 5 | 2 |
| 144 | 144 | 4263 | 1 | 1 | 0 | 121.2 | 5 | 3 |
| 145 | 145 | 4231 | 1 | 0 | 1 | 117.2 | 4 | 4 |
| 147 | 147 | 4117 | 2 | 1 | 0 | 120.4 | 9 | 2 |
| 148 | 148 | 4168 | 2 | 1 | 1 | 109.9 | 4 | 1 |
| 149 | 149 | 4218 | 2 | 1 | 0 | 105.2 | 6 | 2 |
| 150 | 150 | 4269 | 2 | 1 | 1 | 108.6 | 8 | 4 |
| 151 | 151 | 4125 | 1 | 1 | 0 | 126.4 | 8 | 1 |
| 152 | 152 | 4228 | 2 | 1 | 0 | 92.0 | 5 | 4 |
| 154 | 154 | 4121 | 2 | 1 | 0 | 111.9 | 6 | 1 |
| 155 | 155 | 4261 | 2 | 1 | 1 | 107.2 | 5 | 2 |
| 156 | 156 | 4127 | 1 | 1 | 0 | 136.3 | 5 | 2 |
| 157 | 157 | 4118 | 1 | 1 | 1 | 100.0 | 4 | 3 |
| 158 | 158 | 4339 | 1 | 1 | 1 | 106.5 | 5 | 2 |
| 160 | 160 | 4238 | 1 | 1 | 0 | 84.7 | 8 | 2 |
| 161 | 161 | 4132 | 2 | 0 | 1 | 103.9 | 5 | NA |
| 162 | 162 | 4292 | 2 | 0 | 1 | 110.5 | 9 | 4 |
| 163 | 163 | 4257 | 1 | 1 | 1 | 102.6 | 10 | 2 |
| 164 | 164 | 4289 | 1 | 1 | 0 | 91.3 | 9 | 2 |
| 165 | 165 | 4128 | 1 | 1 | 0 | 132.3 | 6 | 2 |
| 166 | 166 | 4238 | 2 | 1 | 1 | 113.9 | 10 | 1 |
| 167 | 167 | 4087 | 2 | 1 | 0 | 105.2 | 10 | 1 |
| 168 | 168 | 4015 | 2 | 1 | 0 | 116.5 | 6 | 1 |
| 170 | 170 | 4065 | 2 | 1 | 1 | 101.2 | 5 | 2 |
| 171 | 171 | 3971 | 1 | 1 | 1 | 94.6 | 10 | 3 |
| 173 | 173 | 3857 | 1 | 1 | 0 | 100.5 | 6 | 4 |
| 174 | 174 | 3904 | 1 | 1 | 1 | 121.8 | 10 | 3 |
| 176 | 176 | 4105 | 2 | 0 | 1 | 113.8 | 2 | 2 |
| 177 | 177 | 4024 | 1 | 1 | 1 | 86.0 | 8 | 2 |
| 179 | 179 | 4132 | 2 | 1 | 1 | 105.9 | 8 | 1 |
| 180 | 180 | 3903 | 2 | 1 | 1 | 105.9 | 9 | 4 |
| 185 | 185 | 4096 | 1 | 0 | 1 | 101.9 | 8 | 2 |
| 186 | 186 | 4076 | 2 | 1 | 1 | 120.4 | 7 | 3 |
| 187 | 187 | 4259 | 1 | 1 | 0 | 140.3 | 10 | 2 |
| 188 | 188 | 4042 | 2 | 1 | 0 | 133.7 | 4 | 1 |
| 189 | 189 | 3967 | 2 | 1 | 0 | 138.3 | 6 | 1 |
| 190 | 190 | 3967 | 2 | 0 | 1 | 112.5 | 7 | 1 |
| 191 | 191 | 4080 | 1 | 0 | 1 | 96.6 | 5 | 2 |
| 192 | 192 | 3997 | 2 | 1 | 1 | 113.9 | 6 | 2 |
| 193 | 193 | 4008 | 2 | 1 | 1 | 105.2 | 5 | 1 |
| 195 | 195 | 4134 | 1 | 1 | 0 | 130.3 | 5 | 1 |
| 196 | 196 | 4160 | 1 | 1 | 1 | 121.7 | 10 | 1 |
| 198 | 198 | 3943 | 2 | 0 | 1 | 109.2 | 10 | 1 |
| 199 | 199 | 4010 | 1 | 1 | 0 | 104.6 | 10 | 2 |
| 200 | 200 | 4010 | 2 | 0 | 1 | 129.0 | 10 | 2 |
| 201 | 201 | 4064 | 1 | 1 | 0 | 92.6 | 6 | 1 |
| 202 | 202 | 4109 | 1 | 1 | 1 | 106.6 | 3 | 1 |
| 203 | 203 | 3994 | 1 | 0 | 1 | 118.5 | 8 | 2 |
| 204 | 204 | 4026 | 1 | 0 | 1 | 101.3 | 5 | 2 |
| 205 | 205 | 4012 | 1 | 1 | 0 | 108.6 | 10 | 3 |
| 206 | 206 | 4044 | 2 | 1 | 0 | 108.6 | 7 | 2 |
| 208 | 208 | 4260 | 2 | 1 | 1 | 97.3 | 6 | 3 |
| 210 | 210 | 4139 | 1 | 1 | 0 | 97.9 | 7 | 3 |
| 212 | 212 | 4183 | 1 | 1 | 1 | 101.9 | 6 | 3 |
| 213 | 213 | 4160 | 2 | 1 | 1 | 101.9 | 5 | 3 |
| 216 | 216 | 4085 | 1 | 1 | 0 | 101.9 | 9 | 1 |
| 220 | 220 | 4135 | 1 | 1 | 0 | 107.9 | 5 | 2 |
| 221 | 221 | 4111 | 1 | 1 | 0 | 115.2 | 10 | 2 |
| 222 | 222 | 4157 | 2 | 1 | 0 | 105.9 | 8 | 4 |
| 223 | 223 | 4177 | 2 | 0 | 1 | 111.3 | 10 | 3 |
| 225 | 225 | 4143 | 1 | 1 | 1 | 138.3 | 5 | 3 |
| 226 | 226 | 4138 | 1 | 1 | 0 | 104.6 | 5 | 2 |
| 228 | 228 | 4196 | 2 | 1 | 1 | 108.5 | 6 | 2 |
| 231 | 231 | 4223 | 1 | 1 | 0 | 127.0 | 4 | 4 |
| 232 | 232 | 4140 | 1 | 0 | 1 | 109.9 | 8 | 2 |
| 235 | 235 | 4073 | 1 | 1 | 1 | 119.8 | 7 | 2 |
| 236 | 236 | 4063 | 1 | 1 | 1 | 91.9 | 2 | 2 |
| 237 | 237 | 4140 | 2 | 1 | 0 | 98.6 | 5 | 4 |
| 238 | 238 | 4168 | 2 | 1 | 0 | 94.6 | 9 | 3 |
| 239 | 239 | 4133 | 1 | 1 | 1 | 104.6 | 3 | 2 |
| 241 | 241 | 4585 | 2 | 1 | 1 | 106.6 | 8 | 4 |
| 242 | 242 | 4111 | 1 | 1 | 0 | 92.0 | 7 | 3 |
| 244 | 244 | 4083 | 1 | 1 | 0 | 110.6 | 6 | 2 |
| 245 | 245 | 4187 | 1 | 1 | 0 | 117.8 | 6 | 1 |
| 246 | 246 | 4519 | 1 | 0 | 1 | 119.2 | 5 | 3 |
| 247 | 247 | 4028 | 2 | 0 | 1 | 111.2 | 5 | 2 |
| 248 | 248 | 4690 | 1 | 1 | 1 | 121.8 | 7 | 2 |
| 249 | 249 | 4764 | 1 | 1 | 0 | 106.6 | 5 | 3 |
| 250 | 250 | 4127 | 1 | 1 | 0 | 124.4 | 9 | 3 |
| 254 | 254 | 4626 | 1 | 1 | 1 | 126.4 | 6 | 2 |
| 255 | 255 | 4282 | 2 | 1 | 0 | 103.3 | 9 | 3 |
| 256 | 256 | 4668 | 1 | 1 | 0 | 111.2 | 7 | 2 |
| 257 | 257 | 4124 | 1 | 1 | 0 | 119.1 | 8 | 2 |
| 259 | 259 | 4733 | 2 | 1 | 1 | 125.0 | 5 | 2 |
| 262 | 262 | 4710 | 2 | 1 | 1 | 94.7 | 9 | 3 |
| 263 | 263 | 4258 | 2 | 0 | 1 | 140.3 | 4 | 2 |
| 264 | 264 | 4441 | 2 | 1 | 1 | 137.7 | 6 | 4 |
| 265 | 265 | 4790 | 1 | 0 | 1 | 132.3 | 4 | 3 |
| 266 | 266 | 4730 | 2 | 1 | 0 | 101.2 | 10 | 2 |
| 267 | 267 | 4671 | 1 | 1 | 0 | 118.5 | 5 | 3 |
| 268 | 268 | 4701 | 2 | 0 | 1 | 121.1 | 8 | 3 |
| 269 | 269 | 4654 | 1 | 1 | 0 | 121.1 | 8 | 3 |
| 270 | 270 | 4724 | 2 | 1 | 0 | 99.3 | 8 | 4 |
| 273 | 273 | 4182 | 2 | 1 | 0 | 99.3 | 9 | 4 |
| 275 | 275 | 4650 | 2 | 1 | 1 | 98.6 | 4 | 3 |
| 276 | 276 | 4668 | 1 | 1 | 0 | 108.5 | 10 | 2 |
| 277 | 277 | 4677 | 2 | 1 | 0 | 105.3 | 8 | 4 |
| 278 | 278 | 4735 | 2 | 1 | 0 | 88.6 | 7 | 3 |
| 279 | 279 | 4652 | 1 | 1 | 0 | 110.5 | 9 | 3 |
| 281 | 281 | 4632 | 1 | 1 | 0 | 95.3 | 10 | 2 |
| 282 | 282 | 4795 | 2 | 1 | 0 | 105.2 | 6 | 4 |
| 283 | 283 | 4649 | 1 | 1 | 1 | 123.8 | 9 | 4 |
| 284 | 284 | 4673 | 1 | 0 | 1 | 129.1 | 4 | 3 |
| 286 | 286 | 4849 | 1 | 0 | 1 | 136.3 | 4 | 4 |
| 288 | 288 | 4654 | 2 | 0 | 1 | 98.6 | 8 | 3 |
| 290 | 290 | 4793 | 1 | 1 | 0 | 88.7 | 5 | 2 |
| 291 | 291 | 4755 | 2 | 0 | 1 | 116.5 | 10 | 4 |
| 292 | 292 | 4734 | 2 | 1 | 1 | 97.9 | 8 | 4 |
| 293 | 293 | 4693 | 1 | 1 | 0 | 120.5 | 6 | 1 |
| 295 | 295 | 4782 | 1 | 0 | 1 | 132.3 | 5 | 3 |
| 296 | 296 | 4776 | 1 | 1 | 1 | 118.5 | 1 | 4 |
| 297 | 297 | 4792 | 1 | 0 | 1 | 137.0 | 5 | 3 |
| 298 | 298 | 4817 | 1 | 1 | 0 | 109.2 | 10 | 4 |
| 300 | 300 | 4863 | 1 | 1 | 0 | 118.5 | 9 | 4 |
| 301 | 301 | 4860 | 2 | 1 | 1 | 106.6 | 9 | 3 |
| 303 | 303 | 4831 | 1 | 1 | 0 | 96.6 | 5 | 4 |
| 304 | 304 | 4797 | 2 | 1 | 0 | 82.7 | 5 | 2 |
| 305 | 305 | 4901 | 1 | 0 | 1 | 81.4 | 7 | 5 |

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

summary(cars)

## speed dist   
## Min. : 4.0 Min. : 2.00   
## 1st Qu.:12.0 1st Qu.: 26.00   
## Median :15.0 Median : 36.00   
## Mean :15.4 Mean : 42.98   
## 3rd Qu.:19.0 3rd Qu.: 56.00   
## Max. :25.0 Max. :120.00

## Including Plots

You can also embed plots, for example:



Note that the echo = FALSE parameter was added to the code chunk to prevent printing of the R code that generated the plot.