

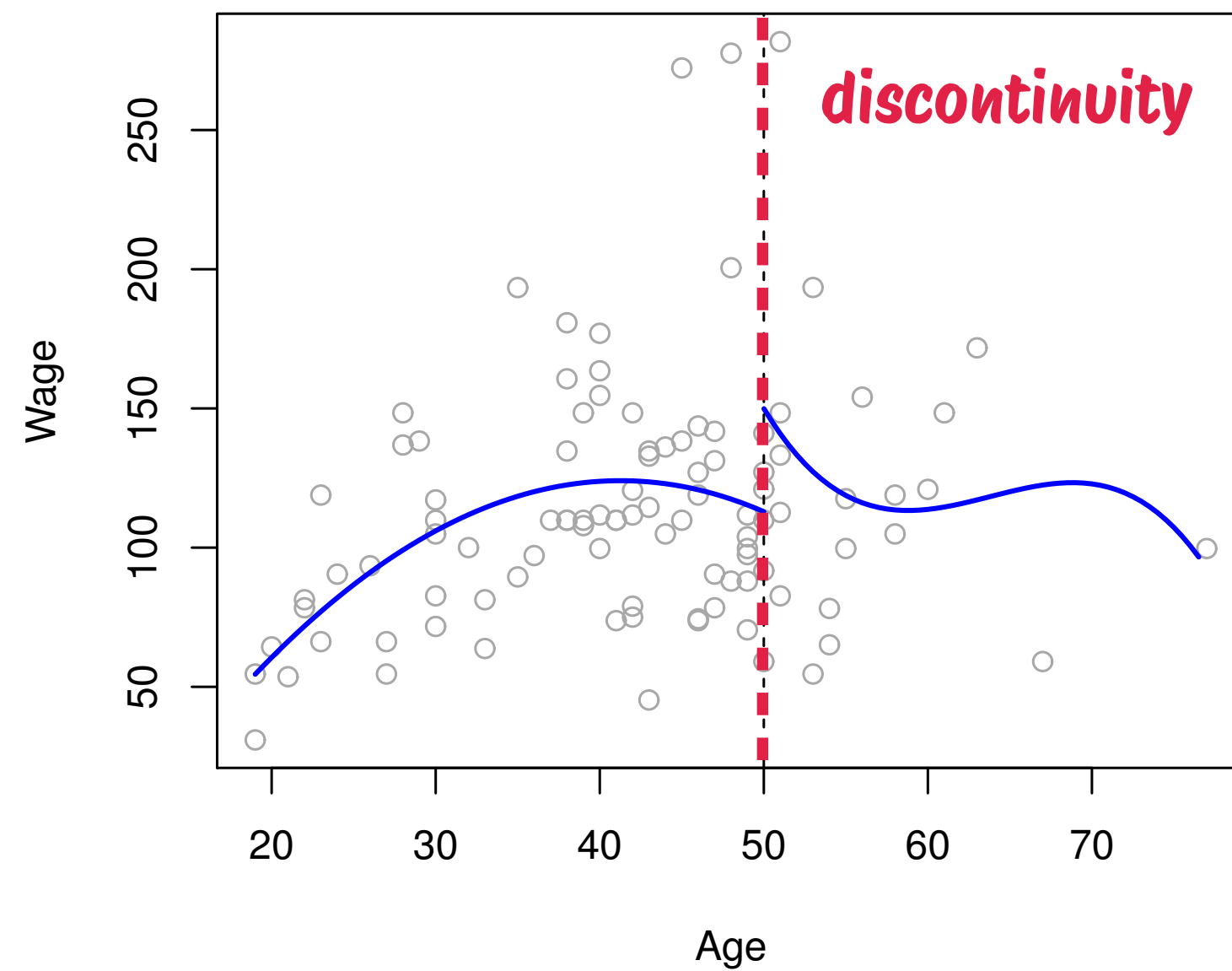
Regression Splines

Example: Wage (ISLR2)

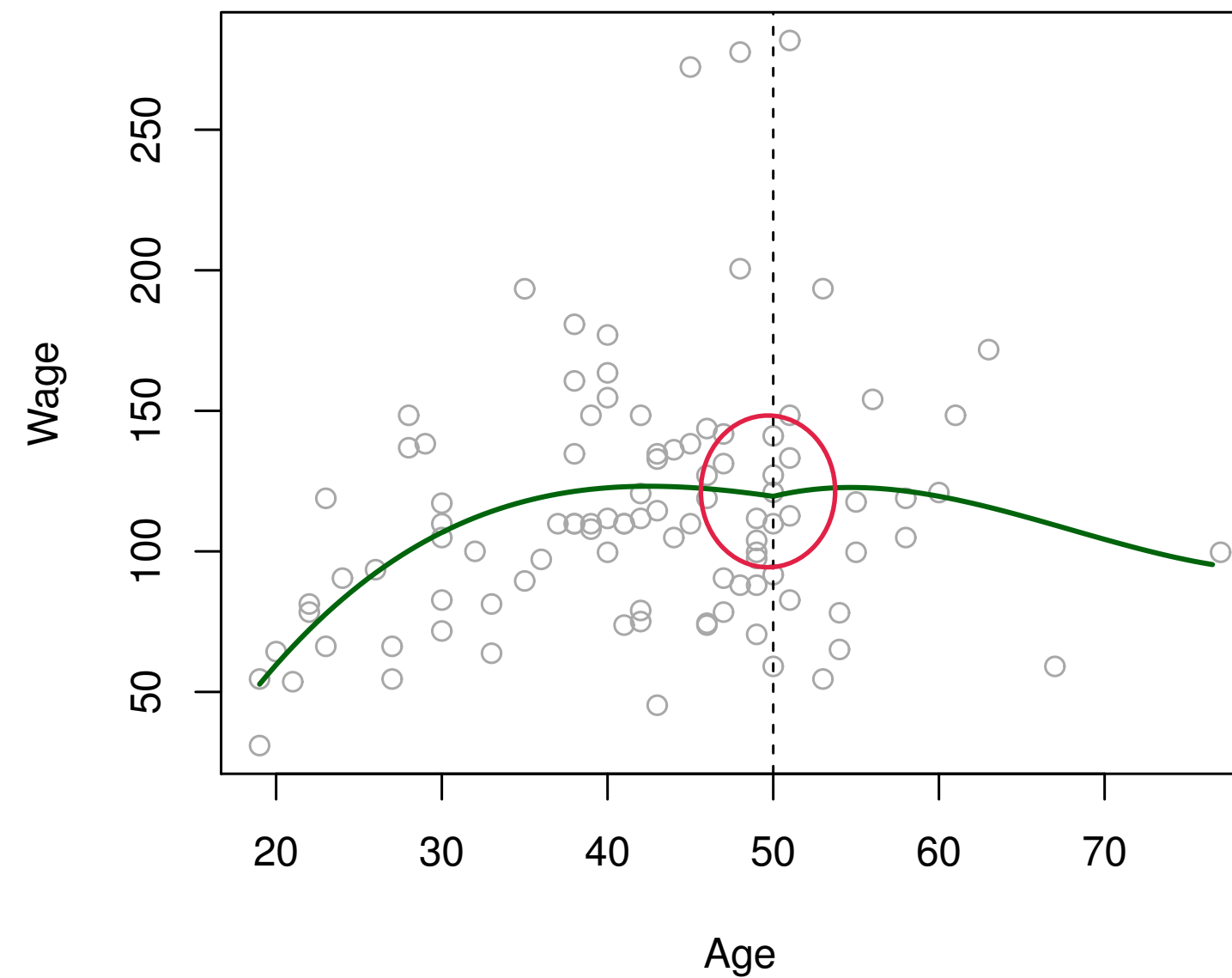
Piecewise cubic polynomial with a single knot placed at age = 50. Constraints:

1. $f_1(\text{age} = 50) = f_2(\text{age} = 50)$

Piecewise Cubic



Continuous Piecewise Cubic



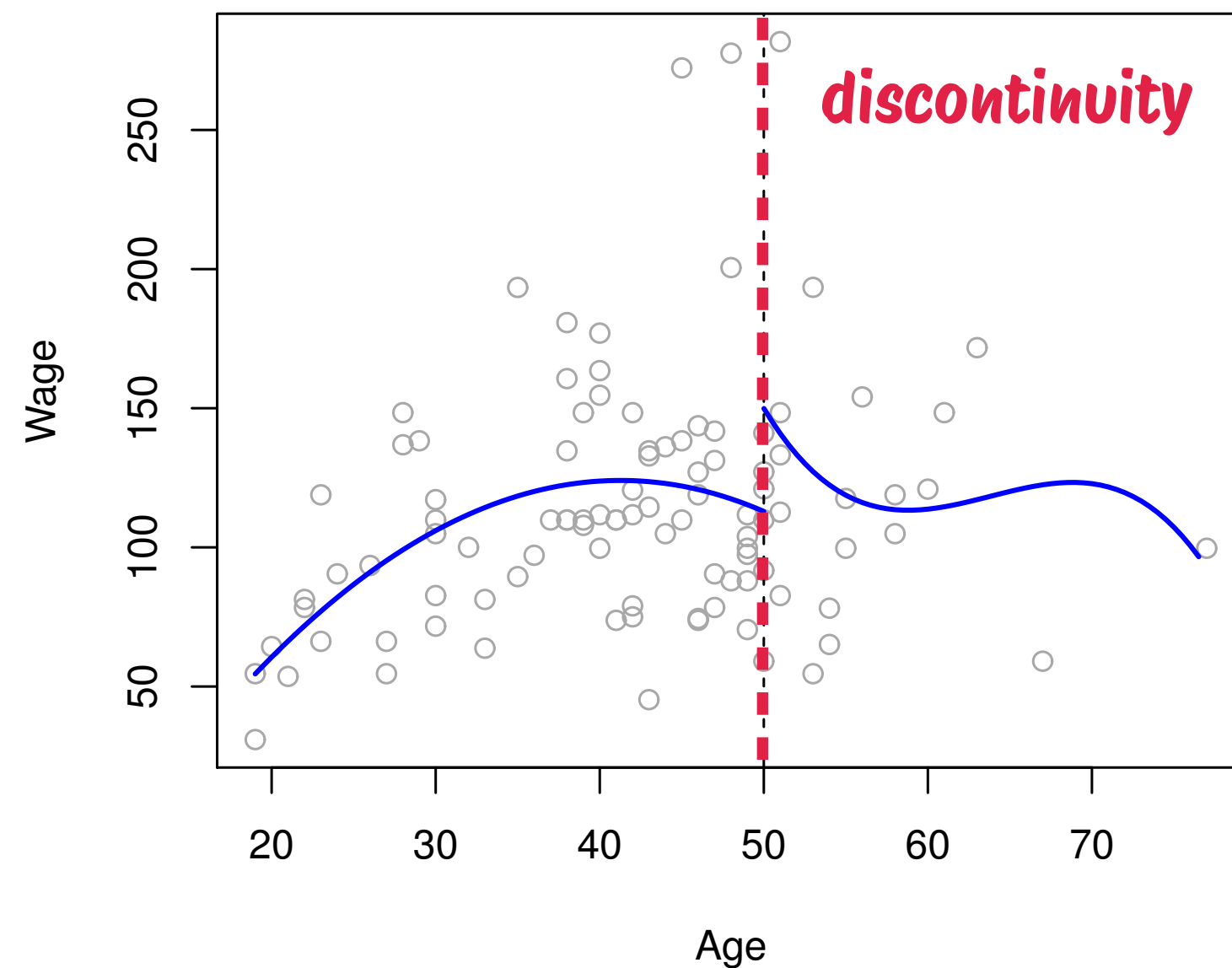
Regression Splines

Example: Wage (ISLR2)

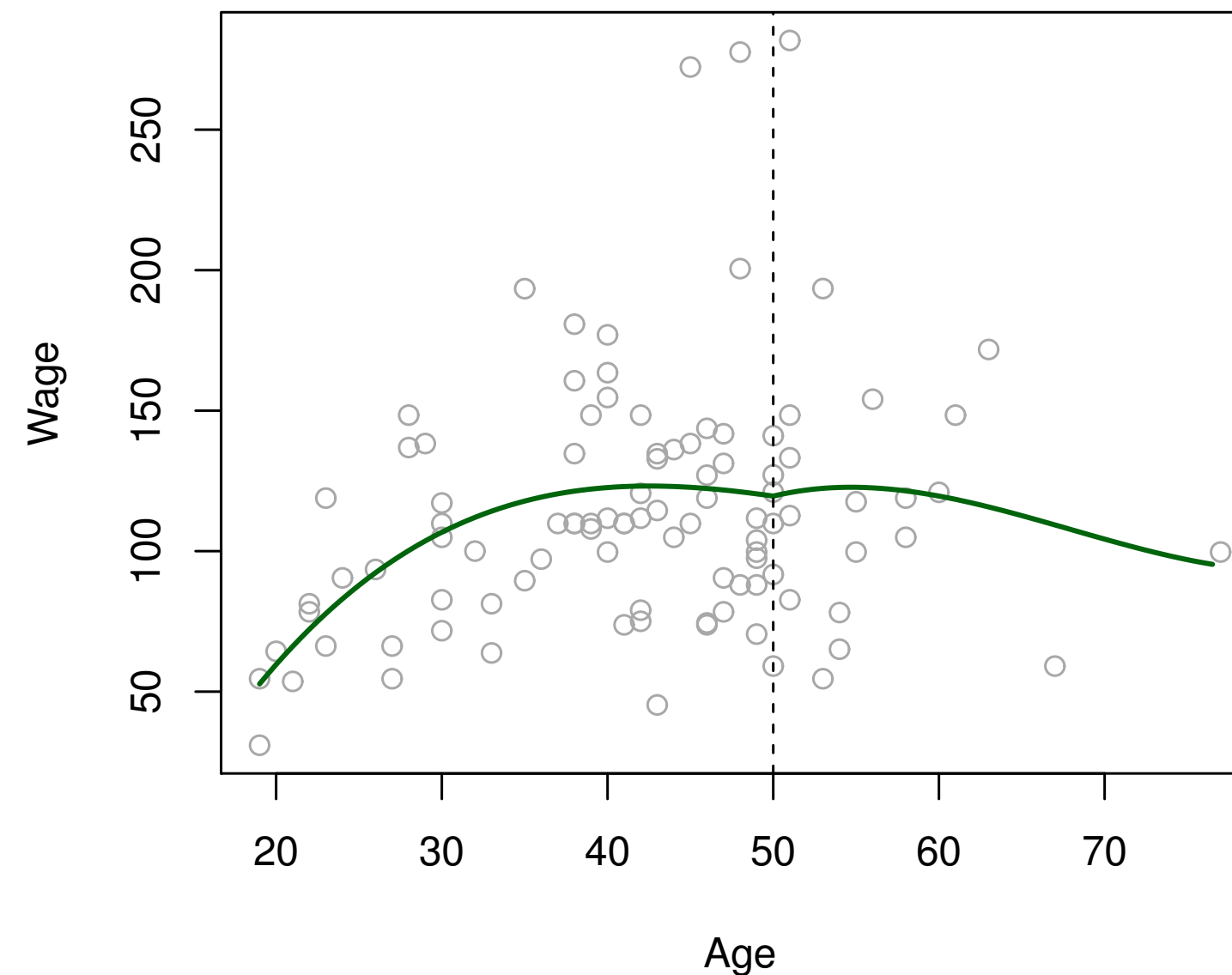
Piecewise cubic polynomial with a single knot placed at age = 50. Constraints:

1. $f_1(\text{age} = 50) = f_2(\text{age} = 50)$
2. $f'_1(\text{age} = 50) = f'_2(\text{age} = 50)$
3. $f''_1(\text{age} = 50) = f''_2(\text{age} = 50)$

Piecewise Cubic



Continuous Piecewise Cubic



Cubic Spline

