

# Biomass by diameter

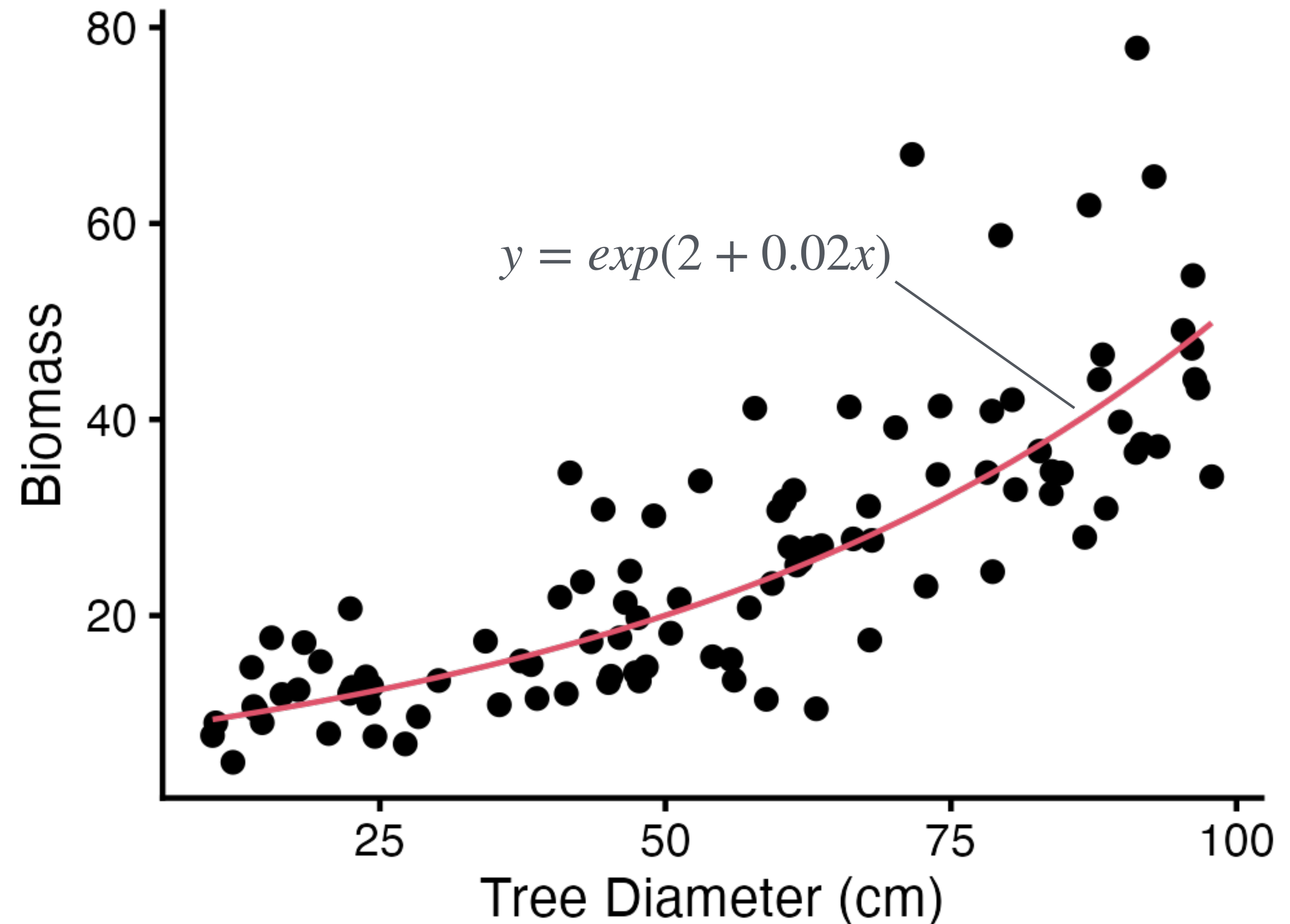
Example of non-linear relation

Option 1: log-transform  $y$

```
df = data.frame(diameter, biomass)
stan_fit = stan_glm(log(biomass) ~ diameter,
                    data = df)
```

Option A: Assign  $y$  a log-normal likelihood

```
rt_fit = ulam(alist(
  biomass ~ lognormal(mu, sigma),
  mu <- a + b*diameter,
  a ~ normal(0, 2),
  b ~ normal(0, 1),
  sigma ~ exponential(1)),
  data = df, chains = 4, cores = 4)
```



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