INTERNATIONAL SHEEP RESEARCH CENTRE

Longevity and wastage in ewes

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Te Kunenga ki Pūrehuroa

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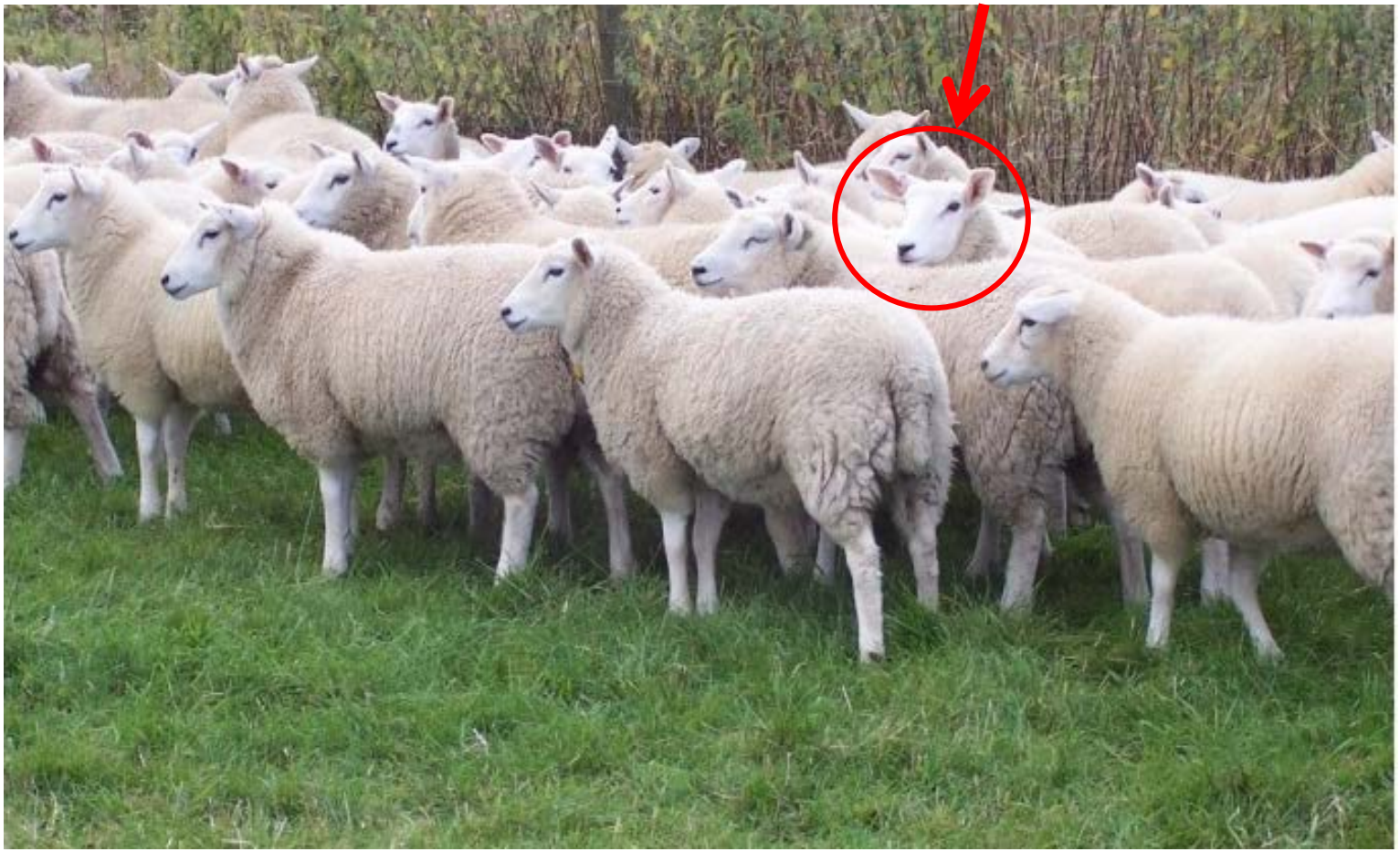
What is meant by longevity and wastage?

- Longevity = ability of ewe to survive and be productive until culled for age

- Wastage = ewes that do not meet the above
  - Culled prematurely
  - Die on-farm

Why is it of interest?

I wonder how long she'll last in the flock?



Some related questions

- Can I identify young ewes that will/won't last in the flock?
- Does hogget mating affect longevity?
- If a ewe has twins every year will she get worn out and drop out of the flock?
- Will a skinny ewe always be a skinny ewe?

Research plan

- ~12,000 ewe hoggets tagged (2010 & 2011)
- ~85% bred as hoggets, ~15% not

Research plan

- Follow through their lives
  - Weigh & BCS 4 times a year
  - Repro data (scanning, wet/dry)
  - Date & reason for cull
  - Collect tags from dead
  - One farm: necropsy ~50 thin ewes/year at scanning time

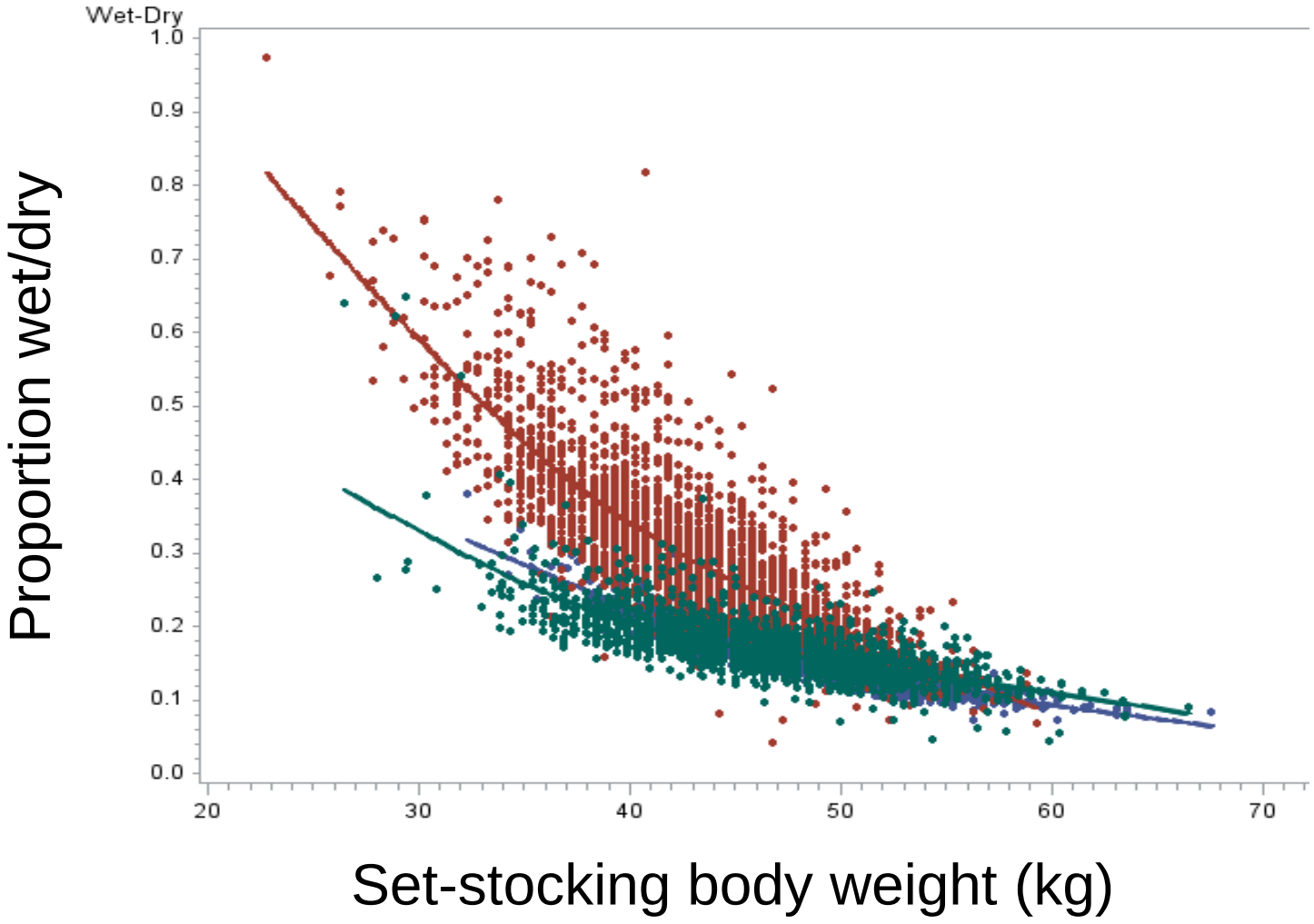
Where are we at?

- Most 2010-born have been culled
- Remainder culled for age in next 1-2 years
  - Main results still unknown
- Analysis on hogget data largely completed

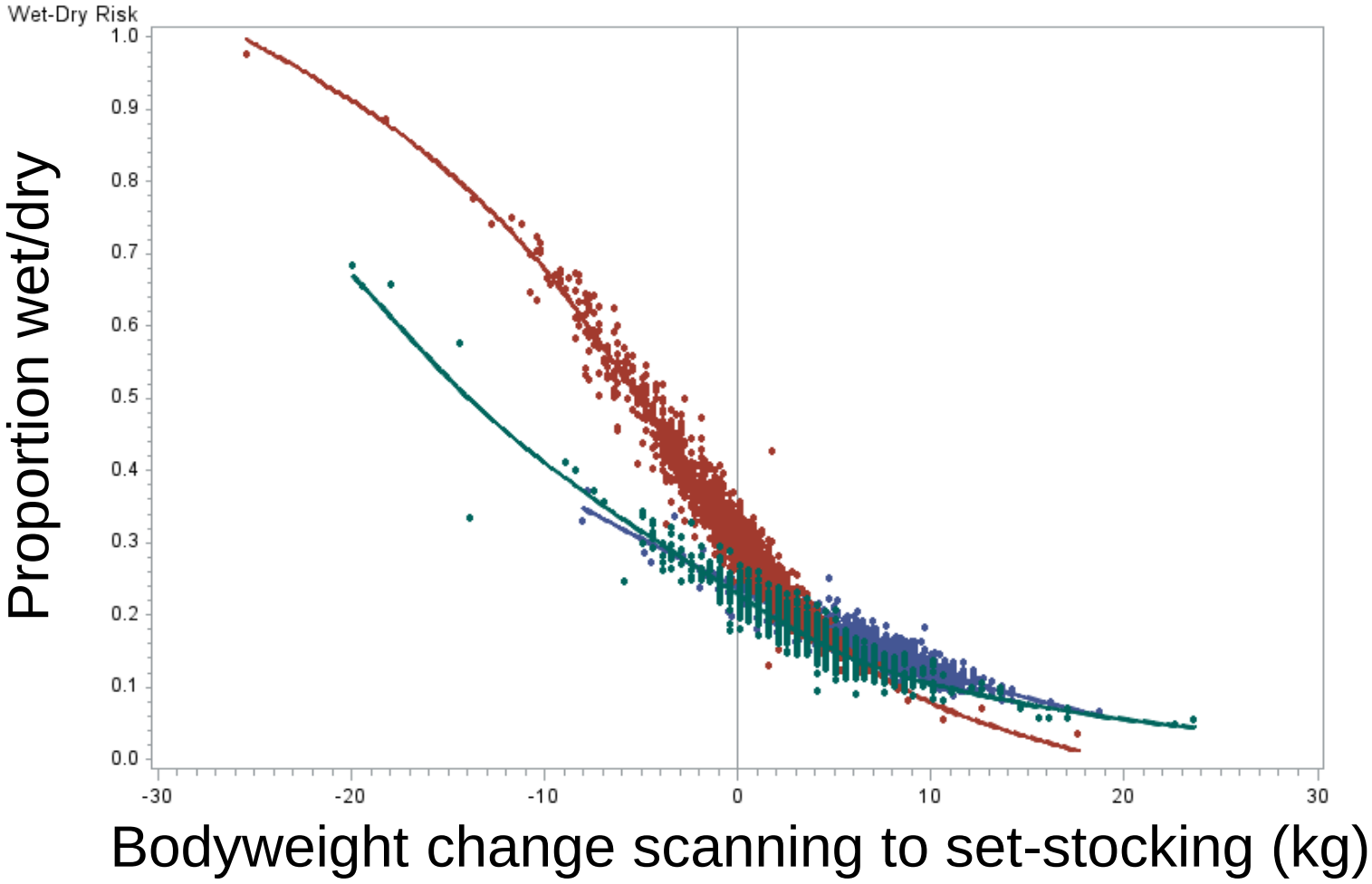
Results: Hogget reproduction

- Mating weight has a big impact on:
  - Pregnancy rate
  - Scanning rate
- Success in rearing a lamb (wet or wet/dry) is influenced by:
  - Scanning & set-stock weight
  - Set-stock BCS
  - Weight change during gestation

Hogget set-stocking weight & likelihood of being wet/dry



Hogget weight change during pregnancy & chance of wet/dry

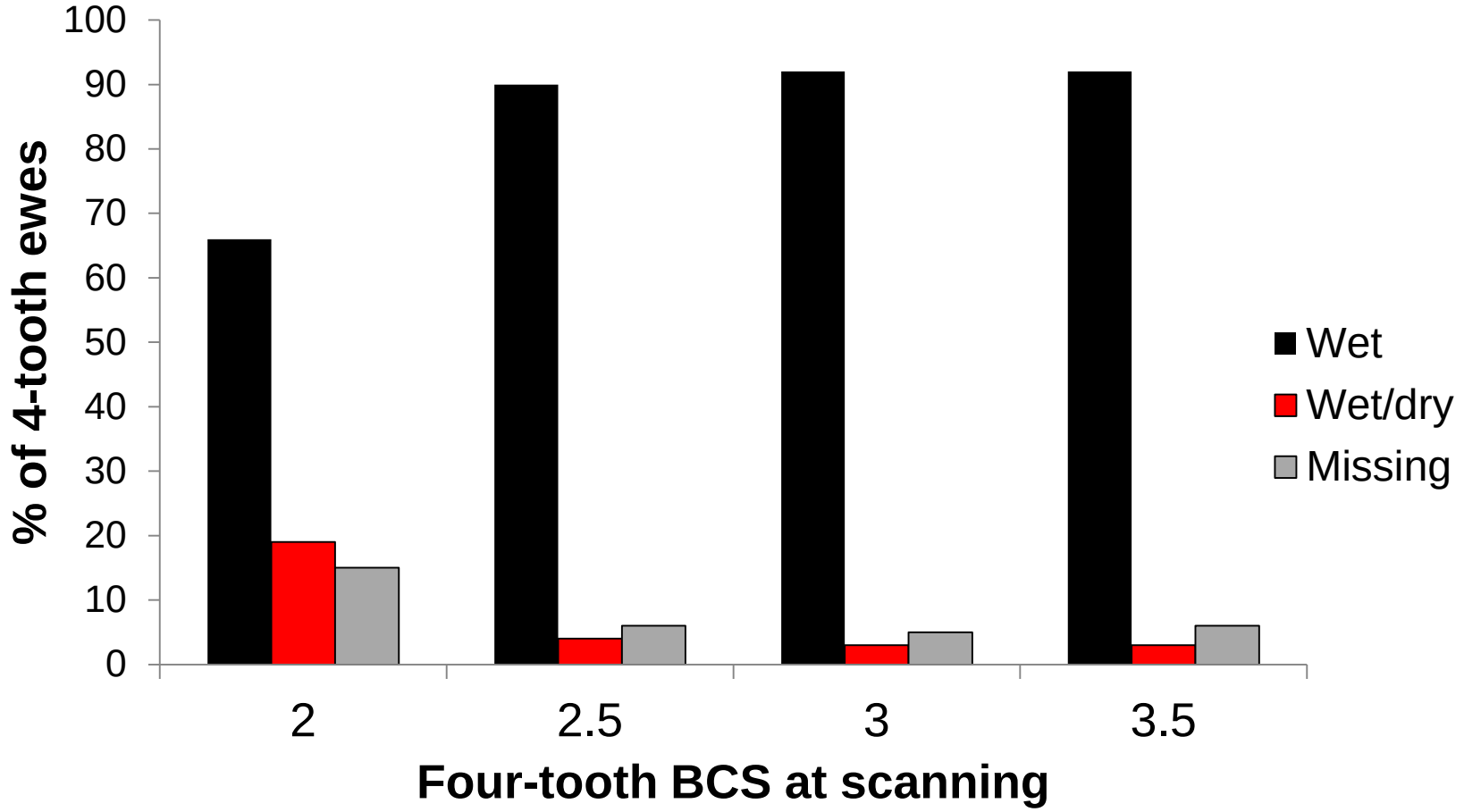


Results: Ewes

- Data still being collected so analysis not completed

- Crude analysis of BCS and wet/dry data suggest:
  - Ewes in poor BCS (2 or less) more likely to die on-farm or be wet/dry
  - Wet/dry hoggets or ewes don't have increased likelihood of being wet/dry again

Four-tooth BCS at scanning and lambing outcome (6,300 ewes)



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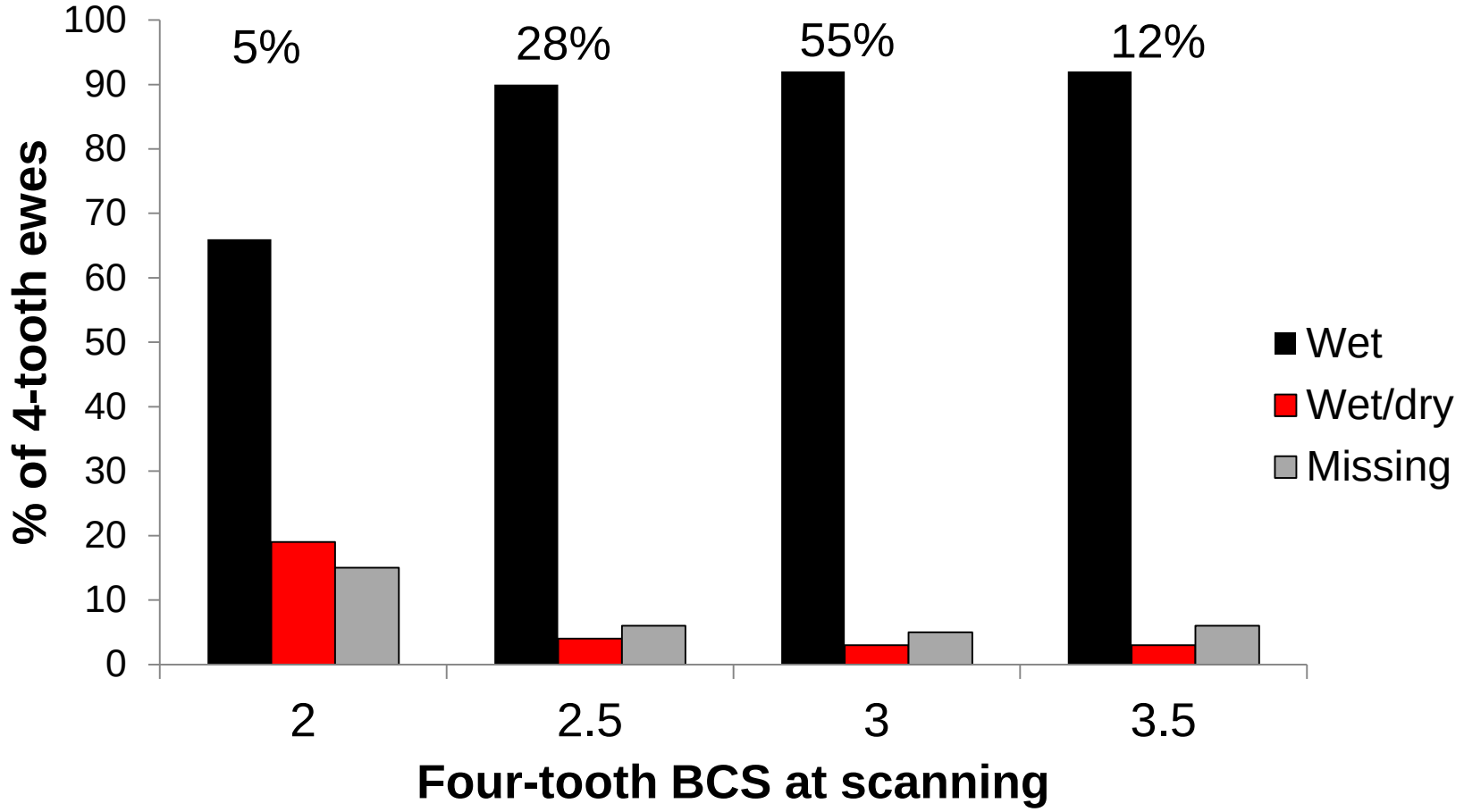


The cost of thin ewes at scanning

- 1,000 ewes, 150% scanning
- 5% BCS ≤ 2 at scanning

  =50 thin ewes
- 10% ↑ in missing/dead = 5 ewes + 7.5 lambs
  - @$60/ewe & $60/lamb = $750
- 15% ↑ in wet/dry = 11.3 less lambs
  - @$60/lamb = $680

The cost of thin ewes at scanning

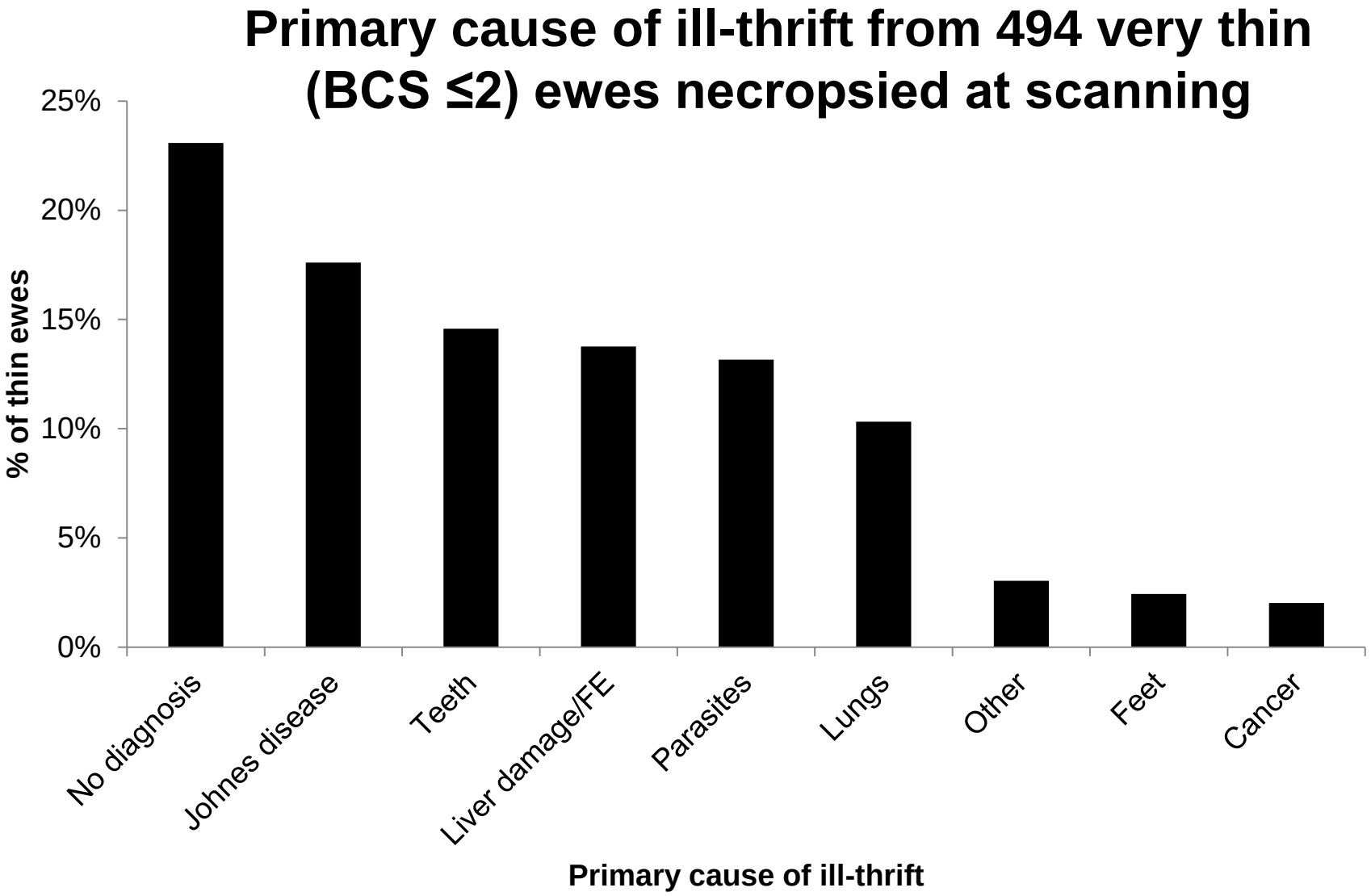
- For every 1,000 ewes, minimum* losses due to having 5% thin at scanning = $1430

  ~$30/thin ewe

- Energy required to get thin ewes from BCS 2 to BCS 3 = ~220MJME or ~20kgDM

*Does not factor in loss of 1 twin or likely ↓ growth rates of lambs born to thin ewes

Causes of thin ewes?



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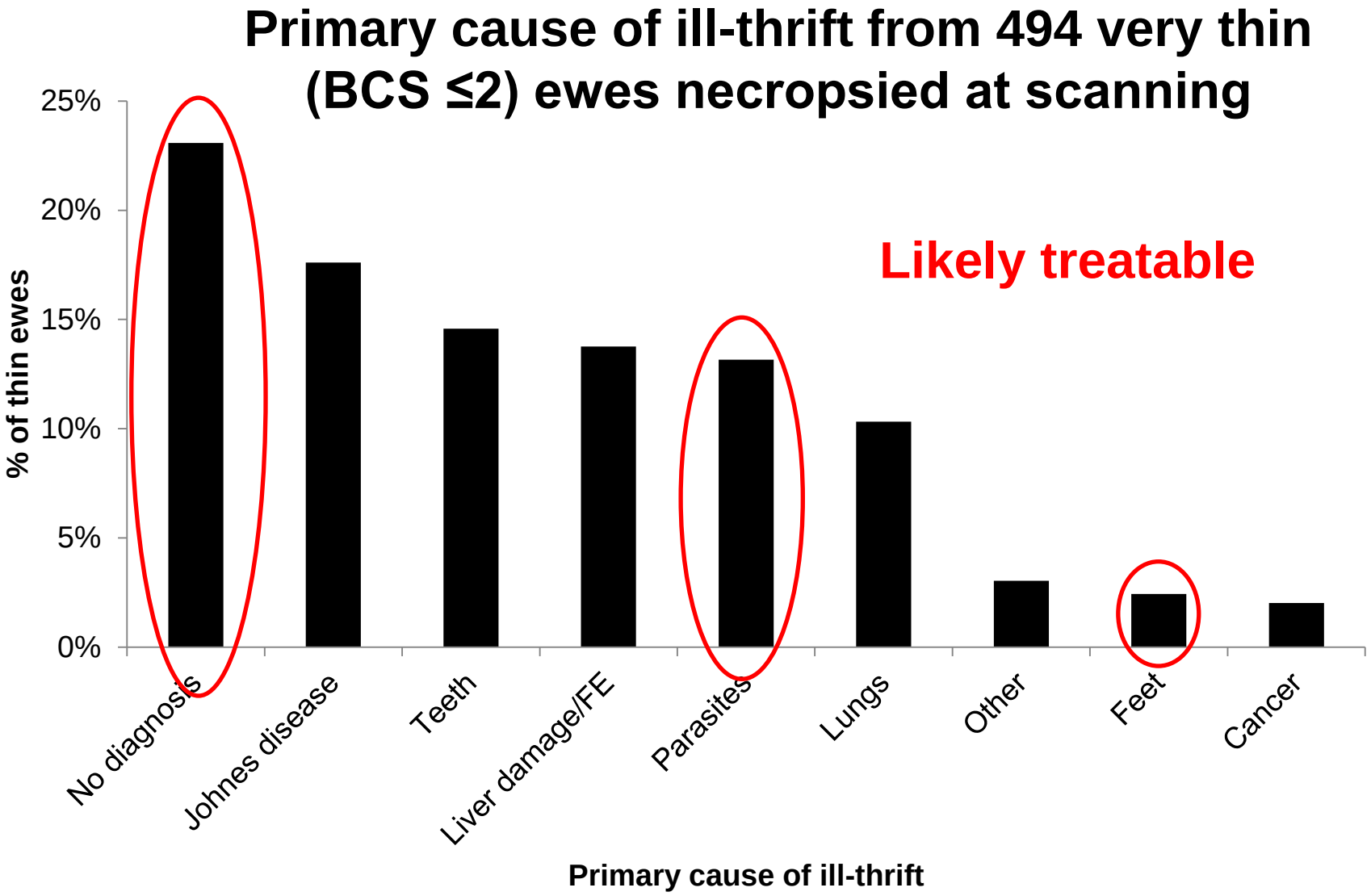

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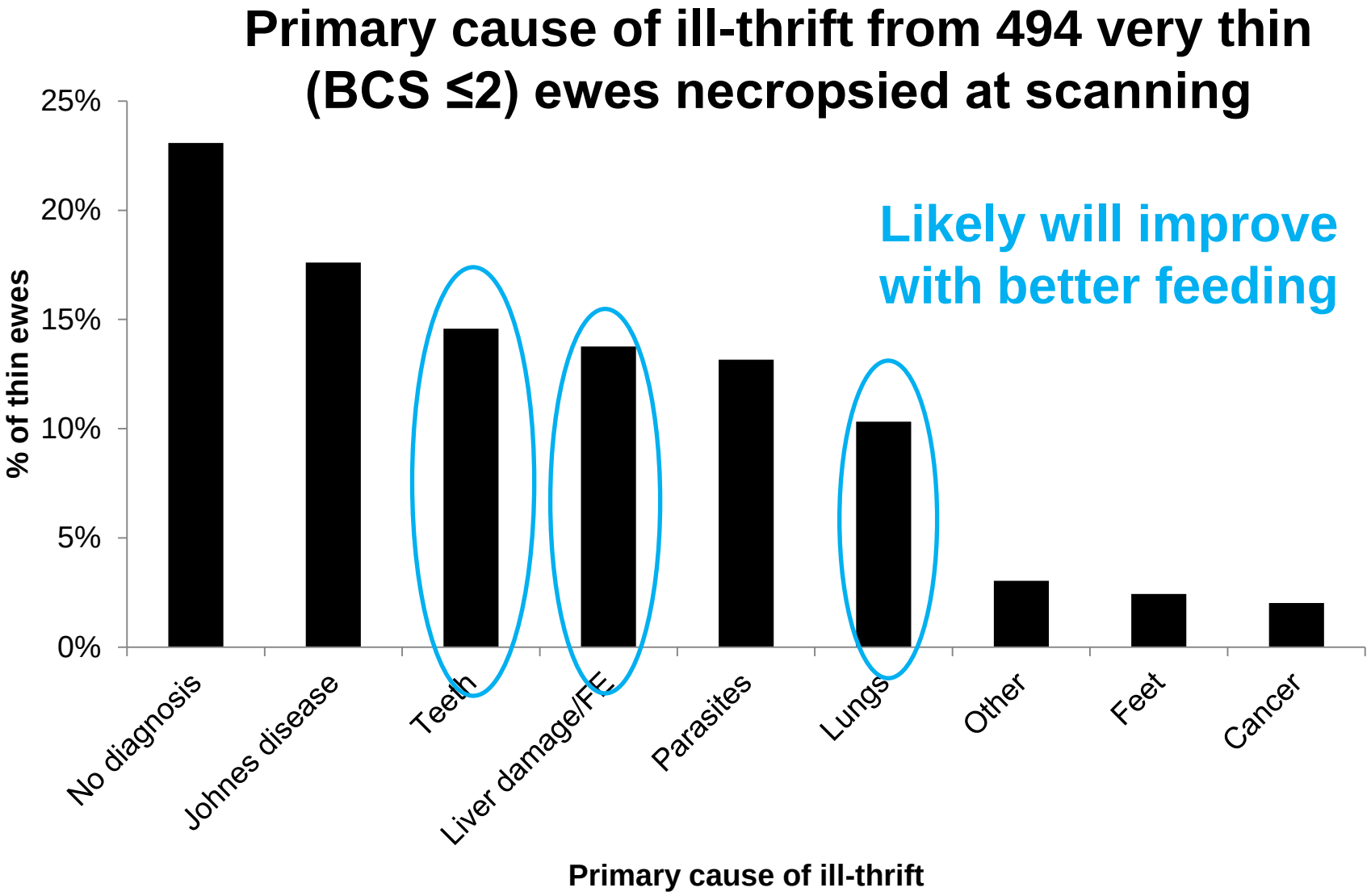

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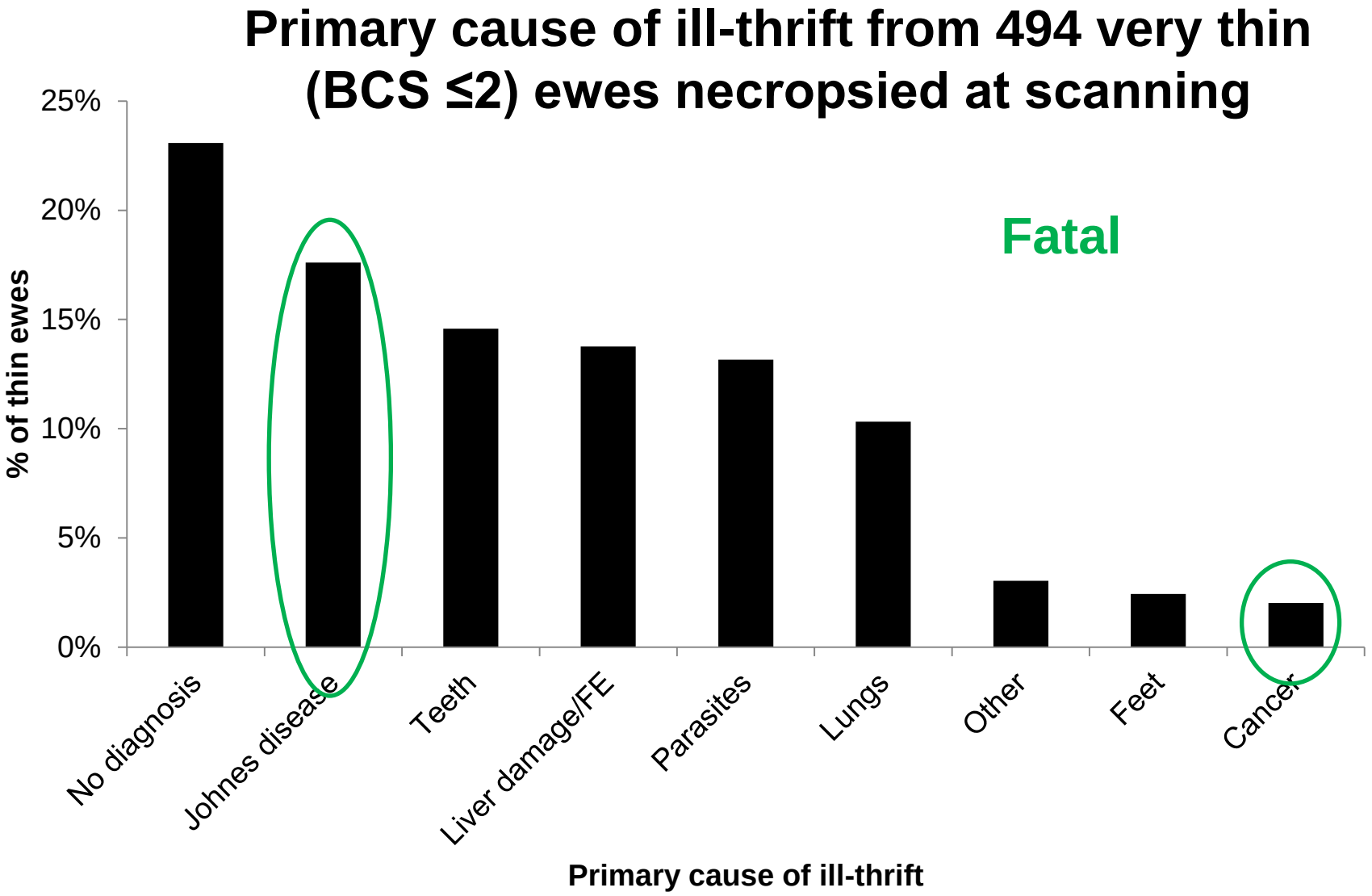


Summary of ewe necropsy study

- Of 494 ewes that were very thin at pregnancy scanning:
  - ~40% had problems that were likely treatable
  - ~40% had conditions that would likely respond to better feeding
  - ~20% had conditions that were fatal

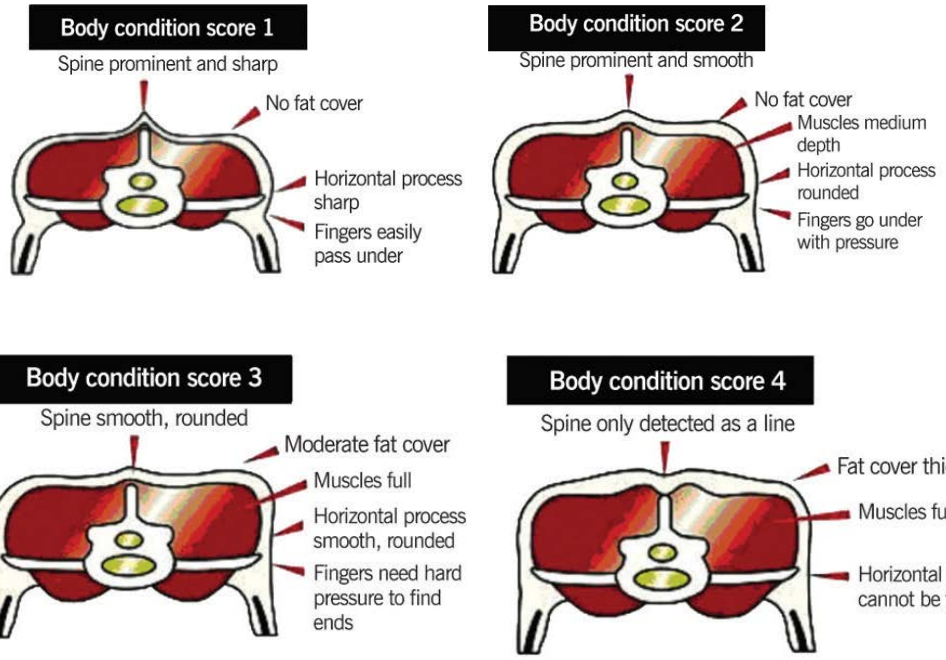
~80% would likely respond to better feeding and/or treatment

What to do with thin ewes?

- Identify and separate
- Cull any that are really bad (BCS 1)
- Drench and treat obvious issues (feet)
- Improve feeding
- Re-assess after 3 weeks
- Cull any that don’t improve

BCS ewes at scanning (and weaning)

Need to put your hand on them
Differentiate between ‘too thin’ and ‘OK’



Too thin

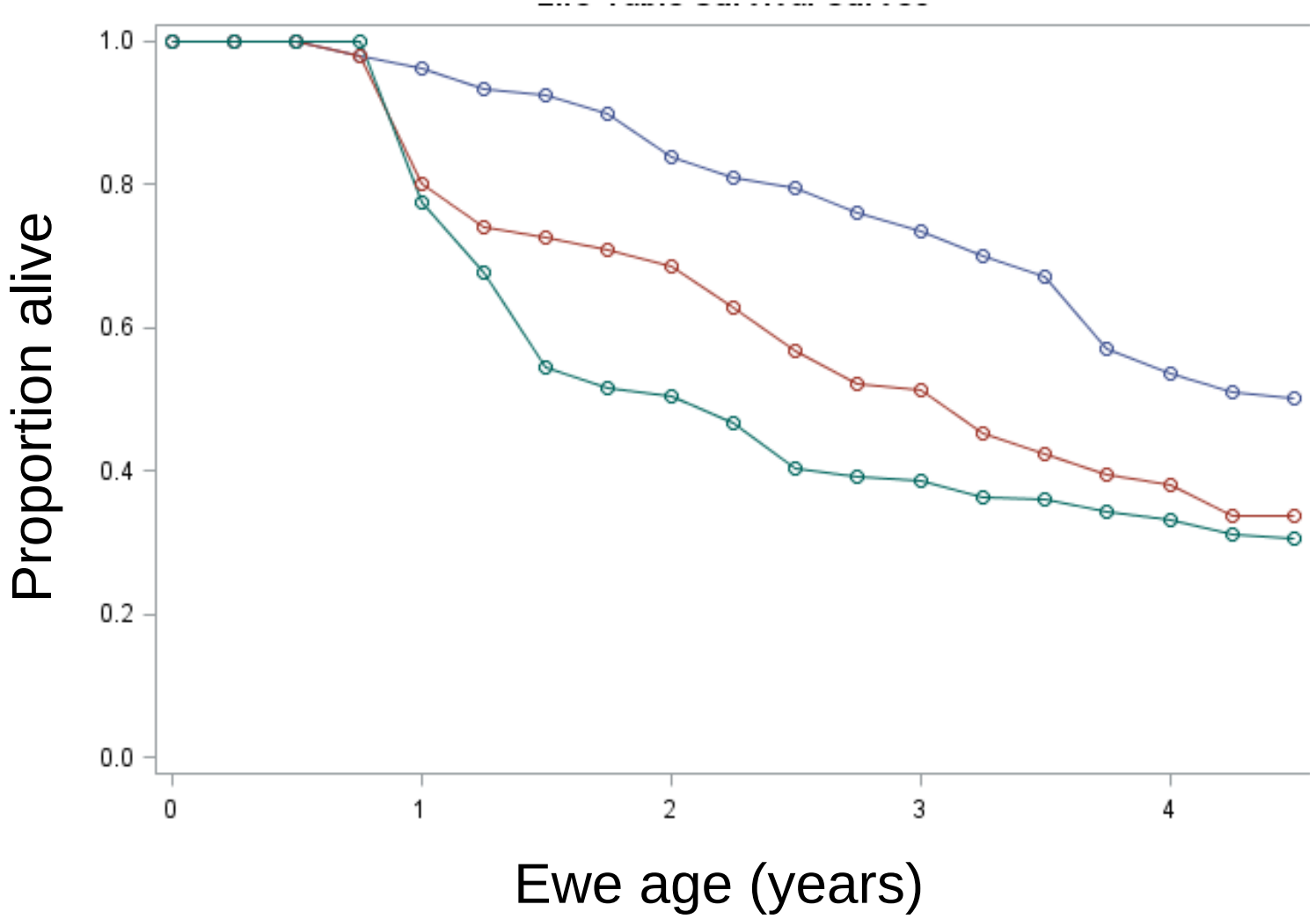
OK

Pictures from beef + lamb NZ Body Condition Scoring Worksheet;
http://www.beeflambnz.com/Documents/Farm/Ewe%20body%20condition%20scoring%20worksheet.pdf

Other findings so far

- Main reasons for wastage:
- Wet/dry ewes (culled)
- **Sheep going 'missing' (presumed dead)**
  - 6-12% per annum
  - Throughout year but higher over lambing

Ewe survival to 4.5 years old



Where to from here?

- Complete longevity dataset and analyse
- Udder study
- Hogget and lamb survival over lambing
- On-farm ewe mortality studies?

Udder study

- Why?
  - Wet-dry ewes
  - Ewes culled based on “poor udder”
  - Lamb growth

- Aims?
  - Define “poor udders” & effect on lamb rearing
  - Scoring system for farmers

Udder study - research plan

- 1,200 commercial ewes
- Data collected 4 times/year
  - Weights & BCS
  - Udder scores
- Lamb survival & weights

Take-home messages so far

- If mating hoggets, ensure:
  - Big enough at mating (40kg+)
  - Grow well (100-150g/day) throughout gestation
- BCS ewes at weaning and scanning; look after thin ewes
- Full results available in 2 years' time!

Acknowledgements

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