



ASQ CRE Prep course

Lesson V. A. 1. a.

Reliability Test Strategies

Types of Testing

A photograph of a person with curly hair, seen from the side and back, wearing a backpack and a white t-shirt. They are standing on a cliff edge, looking out over a vast, calm ocean under a clear sky. The sun is low on the horizon, creating a bright glow and lens flare.

Demonstration Tests

A photograph of a climber in mid-air, suspended from a safety rope. The climber is wearing a white t-shirt, dark pants, and a helmet with a headlamp. They are using their hands and feet to grip the rock face. The background is a light-colored, textured rock wall under a clear sky.

Qualification Testing

Performance Testing

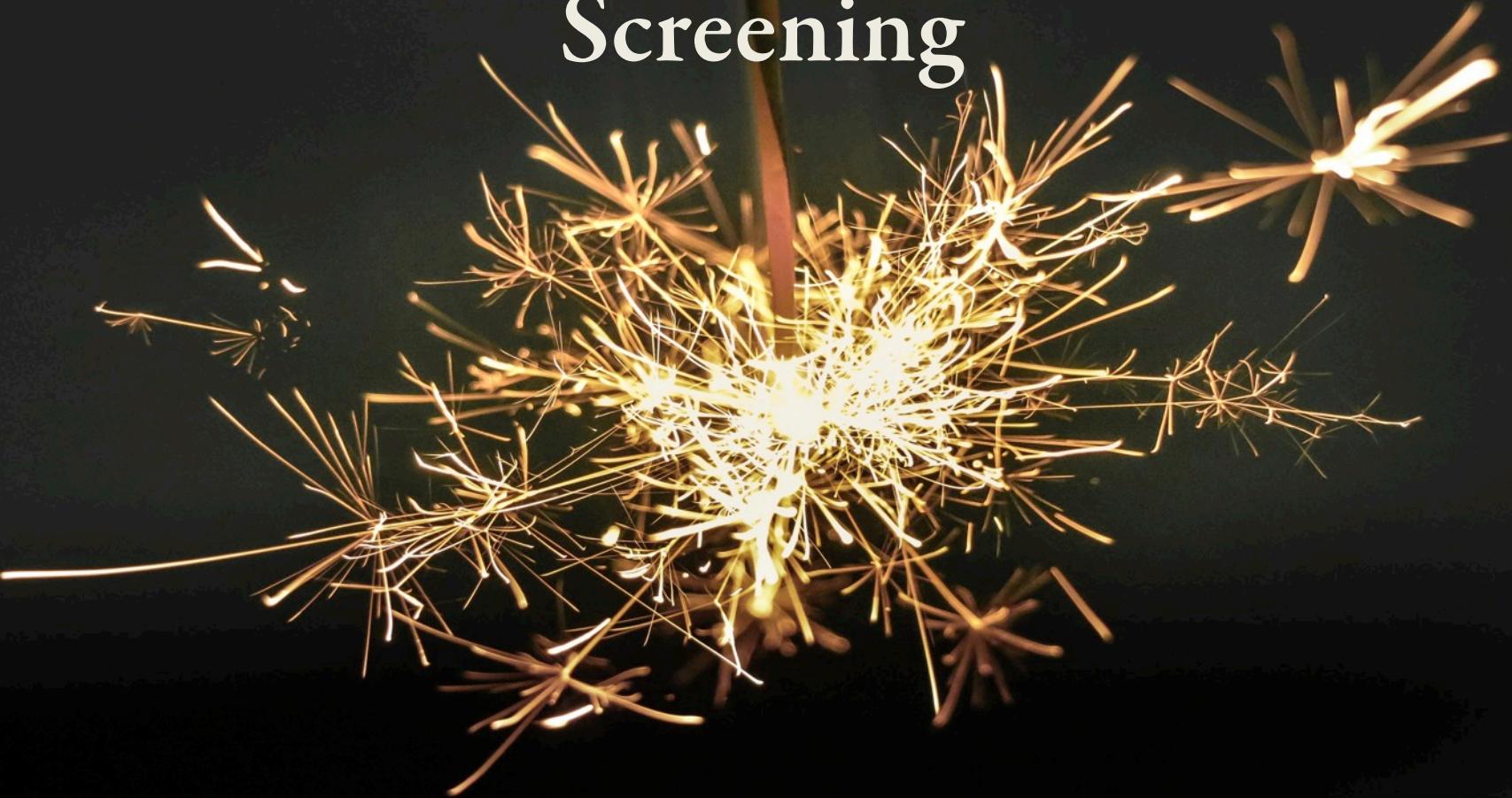


Failure Free Testing



$$n = \frac{\ln(1 - C)}{m^\beta \ln(R)}$$

Screening



A photograph of three dolphins swimming in the ocean. The water is a deep blue, and the surface is visible in the background with sunlight reflecting off the waves. The dolphins are dark grey or black, with one showing a distinct white patch on its side. They are swimming in a line, moving from the bottom left towards the top right.

Development Tests

Setting of Tolerances

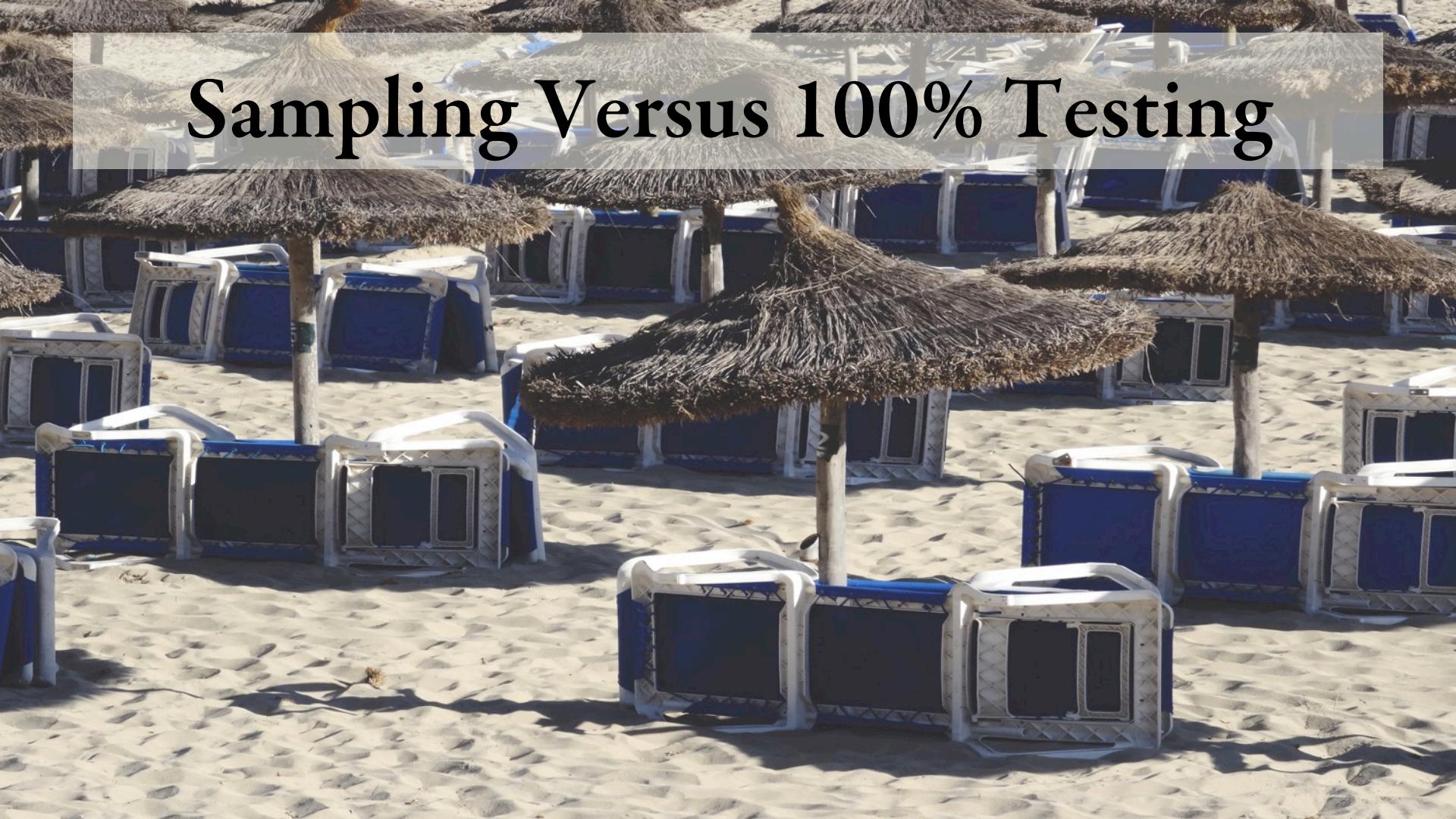


Attributes



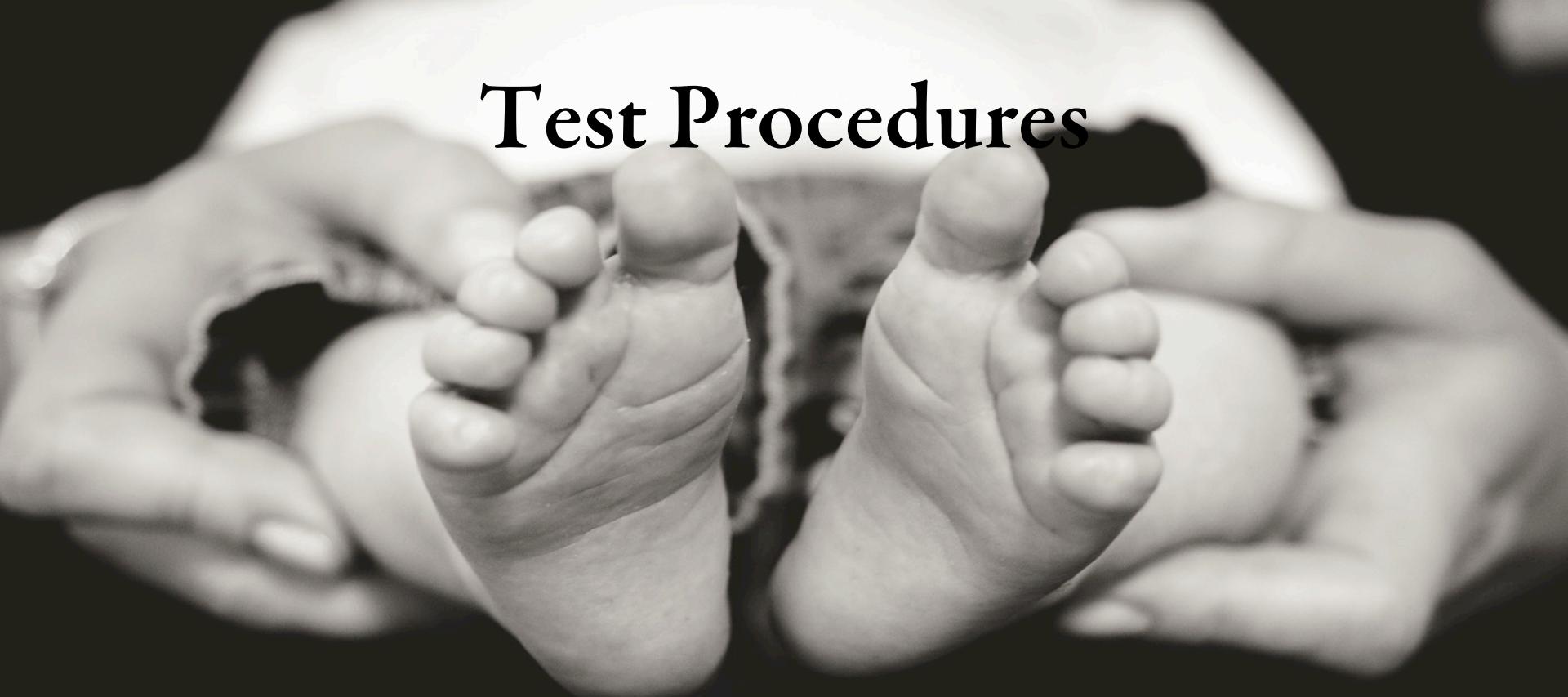
Classification of Characteristics



A photograph of a beach with numerous blue and white deck chairs and thatched umbrellas arranged in rows on a sandy surface.

Sampling Versus 100% Testing

Test Procedures



Test to Failure





Degradation Testing

Truncation Tests

A wide-angle photograph of a winter landscape at sunset. In the foreground, a river flows through a valley, its surface reflecting the warm orange and pink hues of the sky. The banks of the river are heavily covered in snow, with patches of bare ground and low-lying plants visible. To the right, a large, snow-dusted mountain rises, its slopes covered in a mix of snow and dark evergreen trees. The sky is filled with dramatic, wispy clouds that are colored by the setting sun, creating a serene and beautiful atmosphere.

Other types of
testing?



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Human Factors Testing