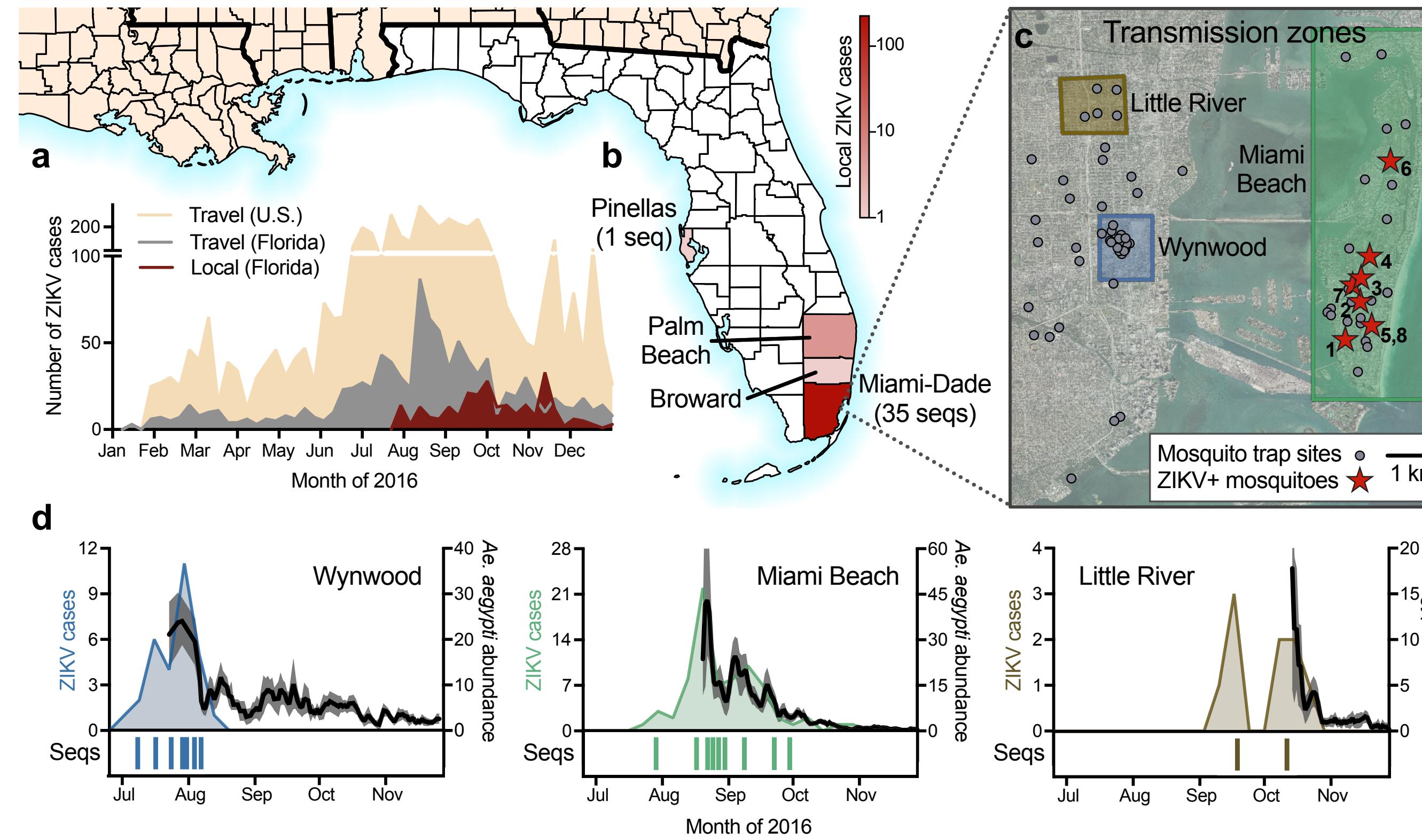
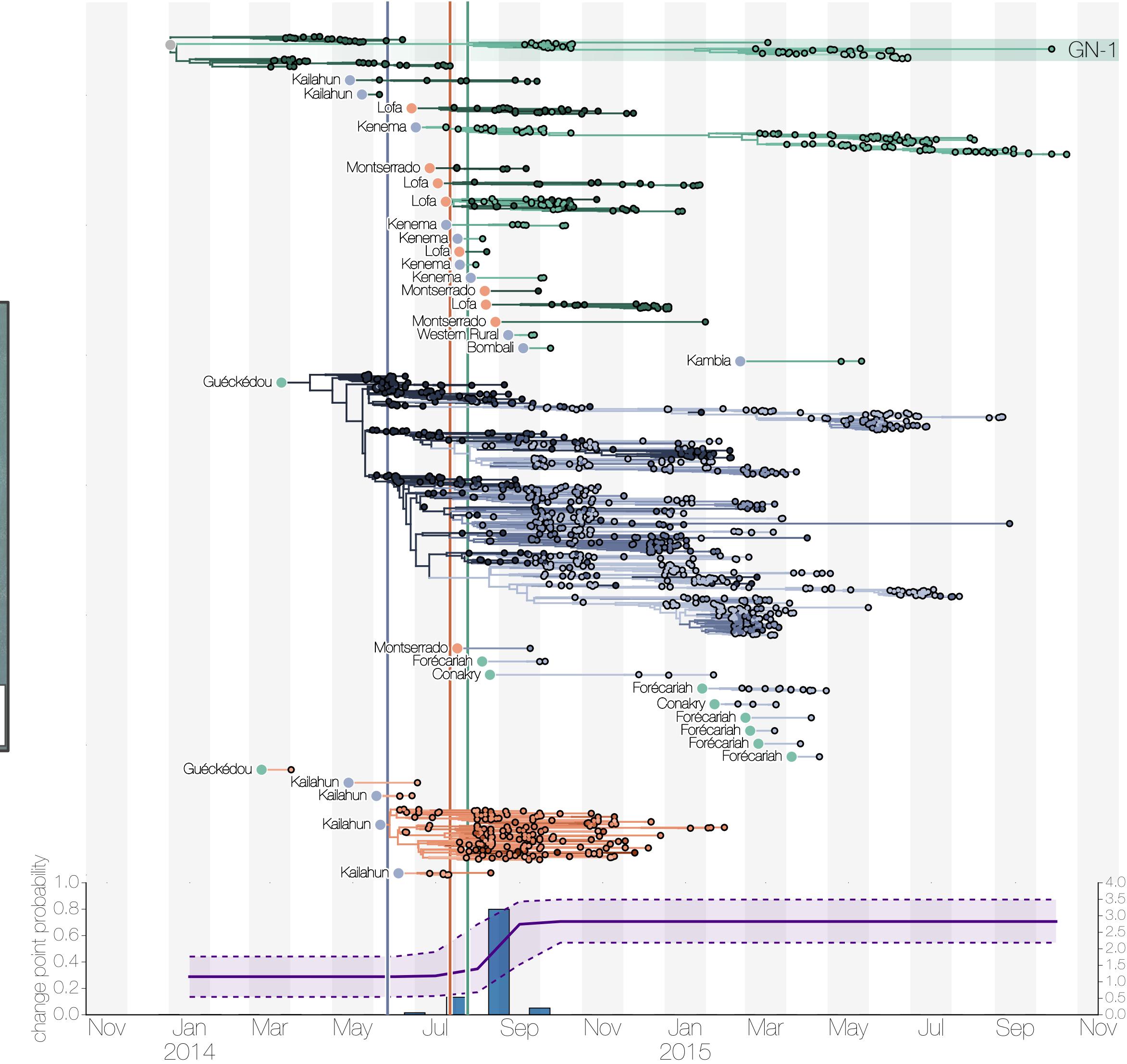


Graphical Concepts

Fall 2018
PCfB Class 8
October 19, 2018



Grubaugh et al. 2017, Nature

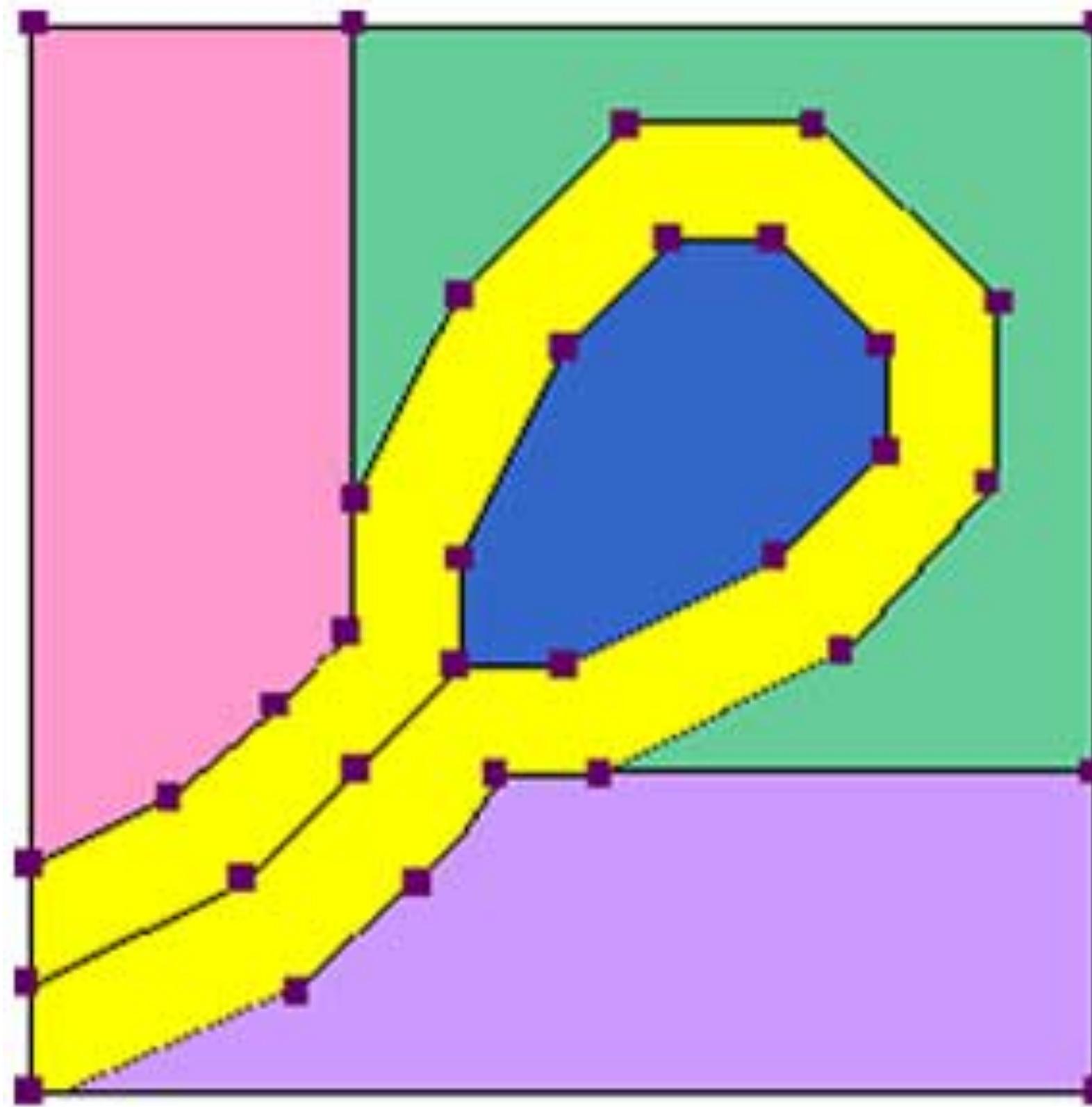


Dudas et al. 2017, Nature

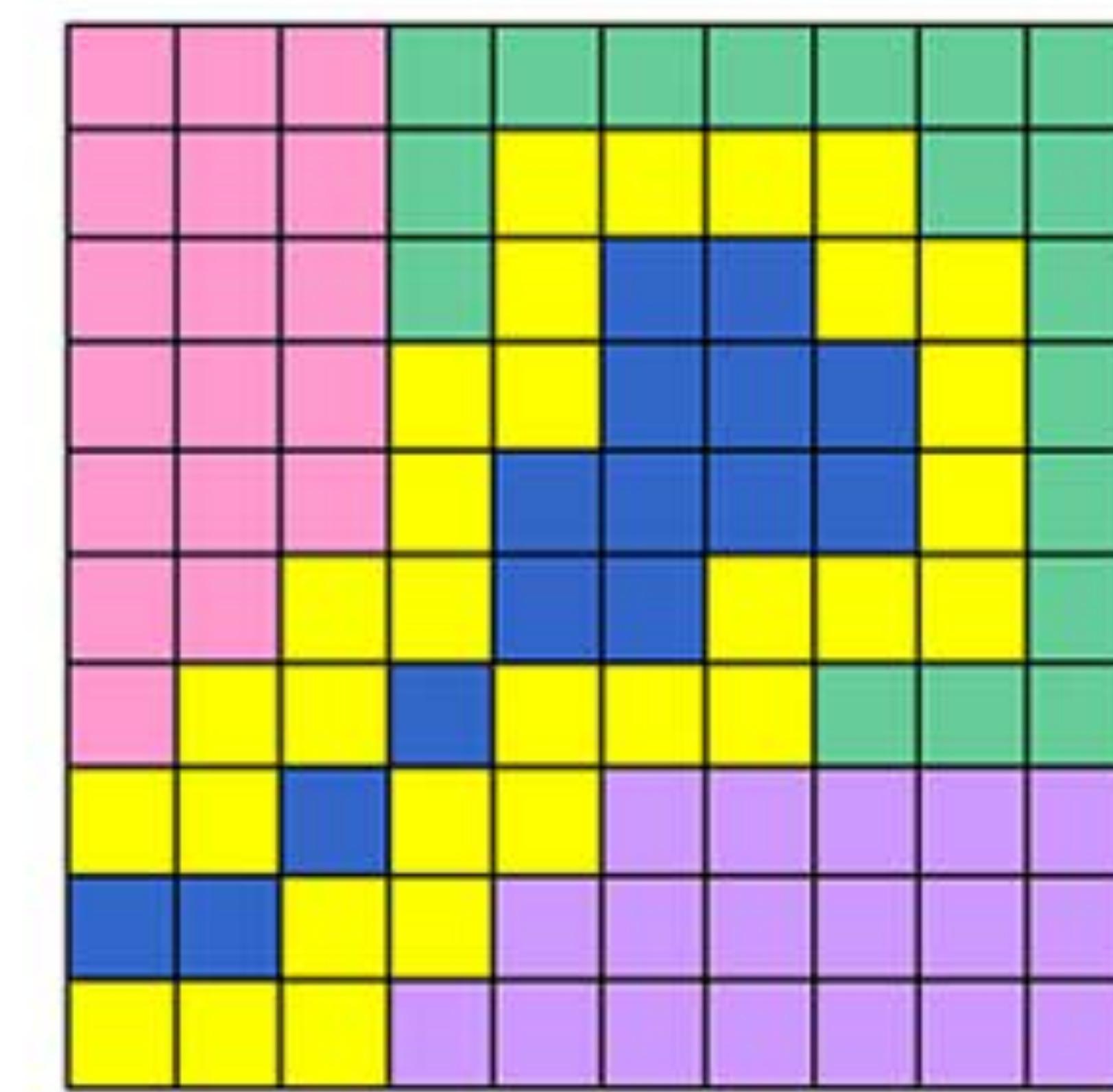
Objectives

- Overview of graphical concepts
- Exposure to editing programs

Types of digital images



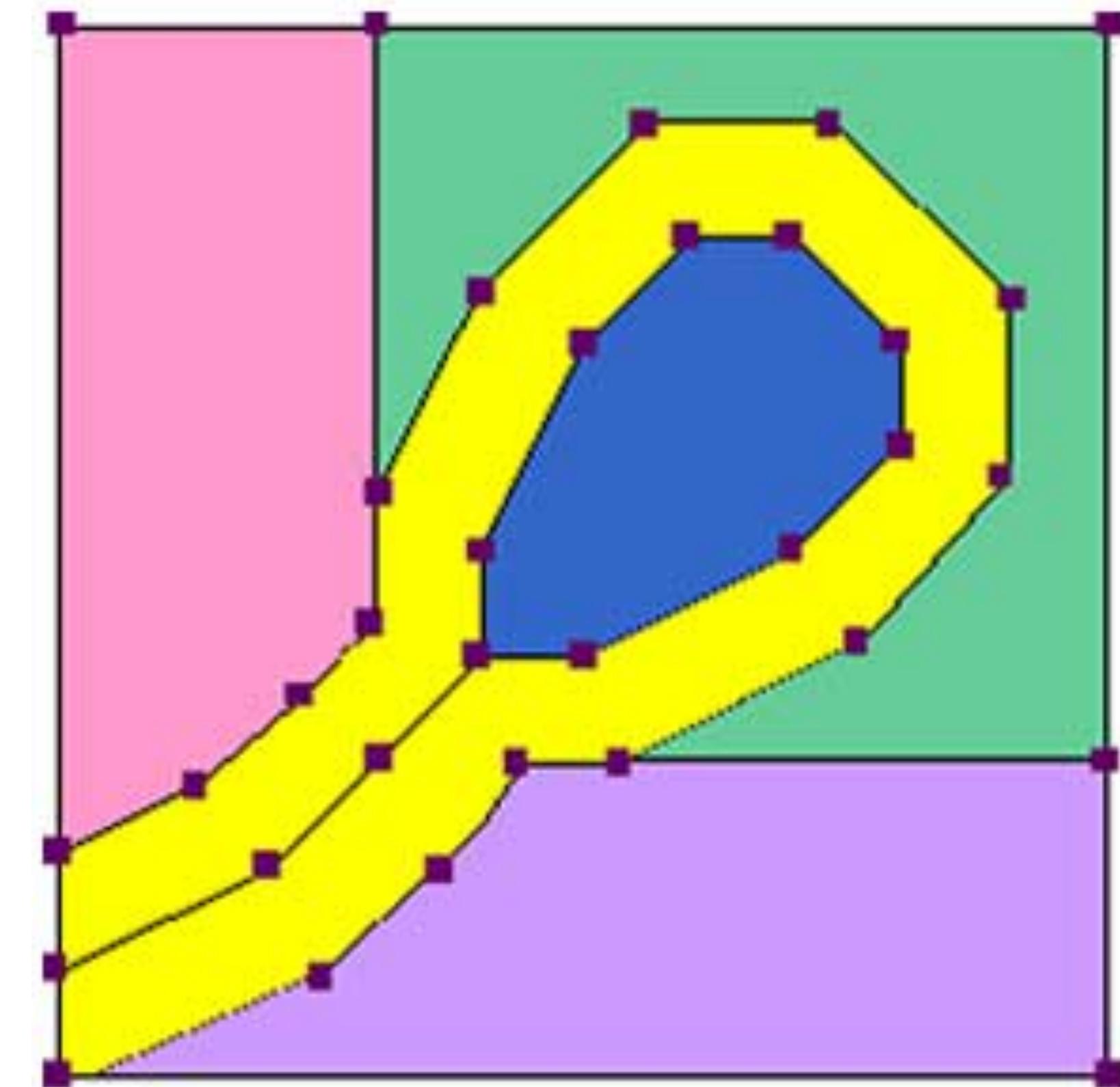
vector-based



pixel-based

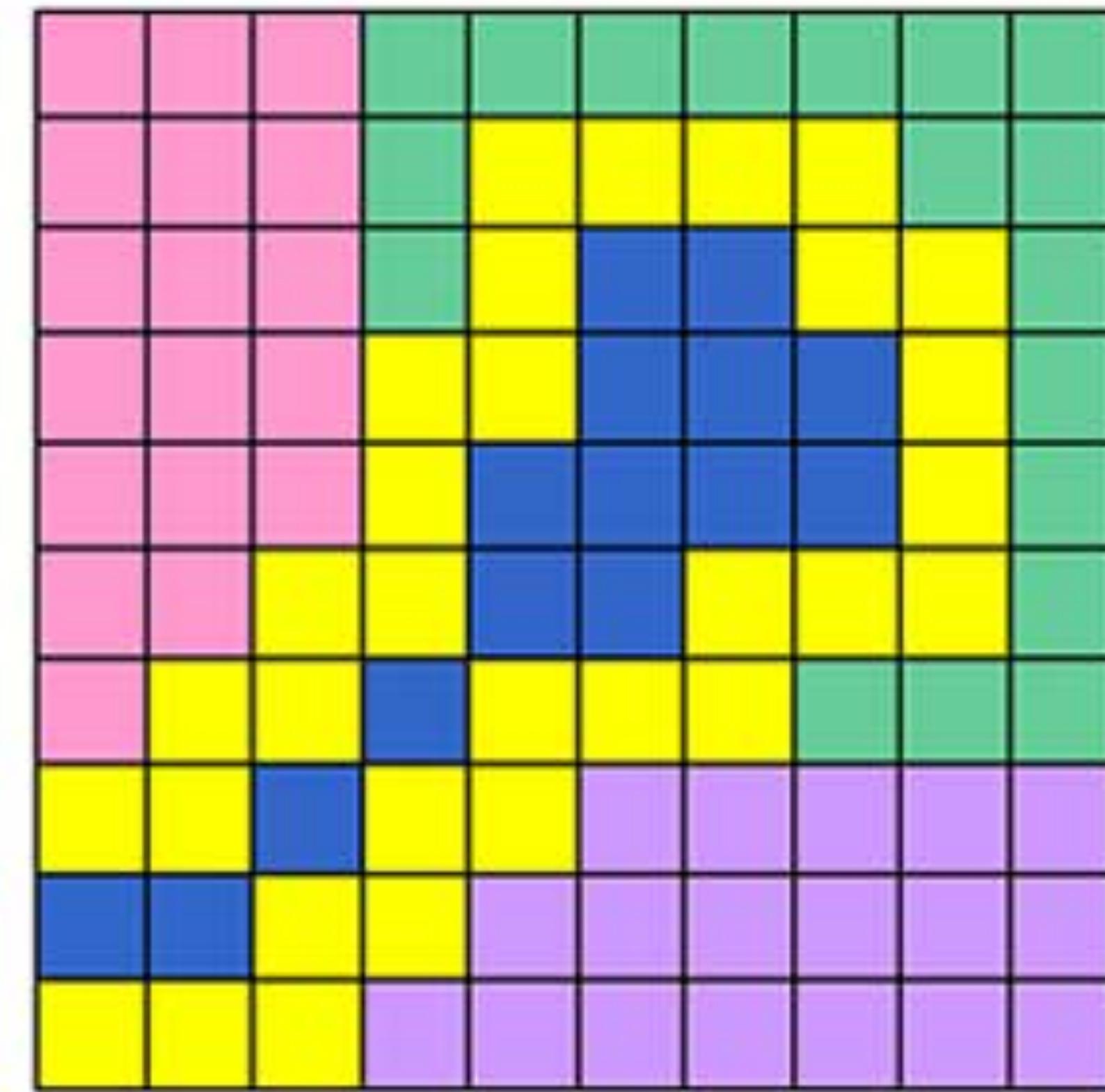
Vector-based images

- Composed of independent shapes
- Each shape editable as a unit

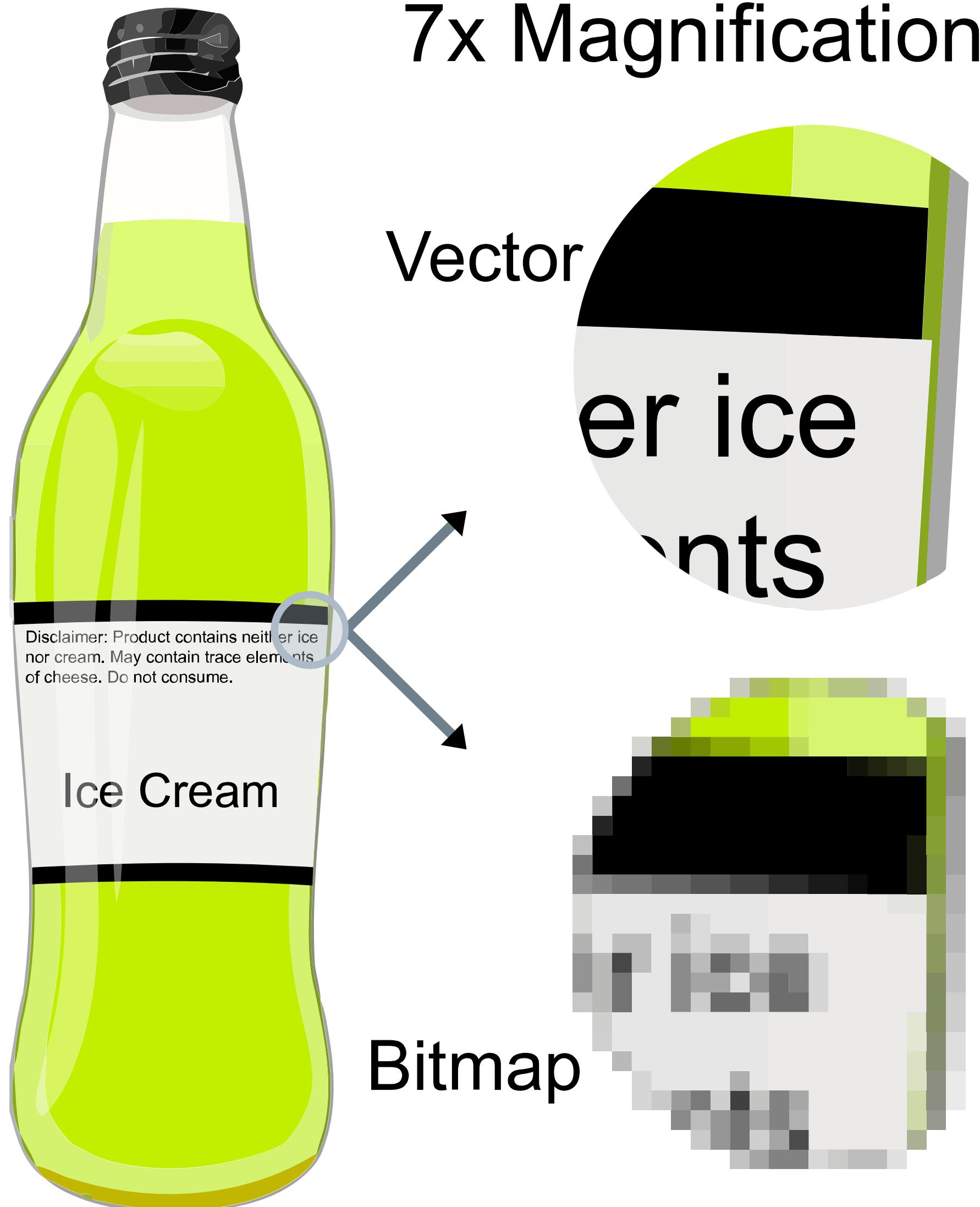


Pixel-based images (raster)

- Composed of squares of different colors
- Only editable by changing the colors of individual squares

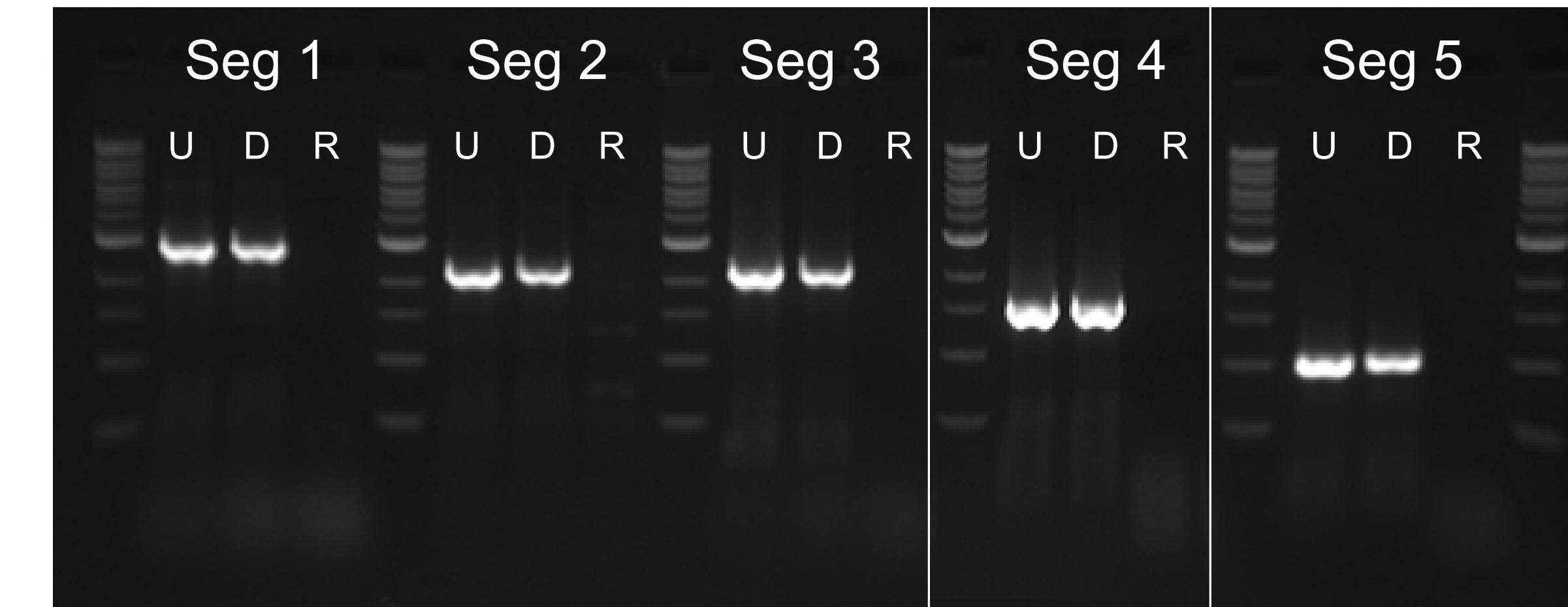
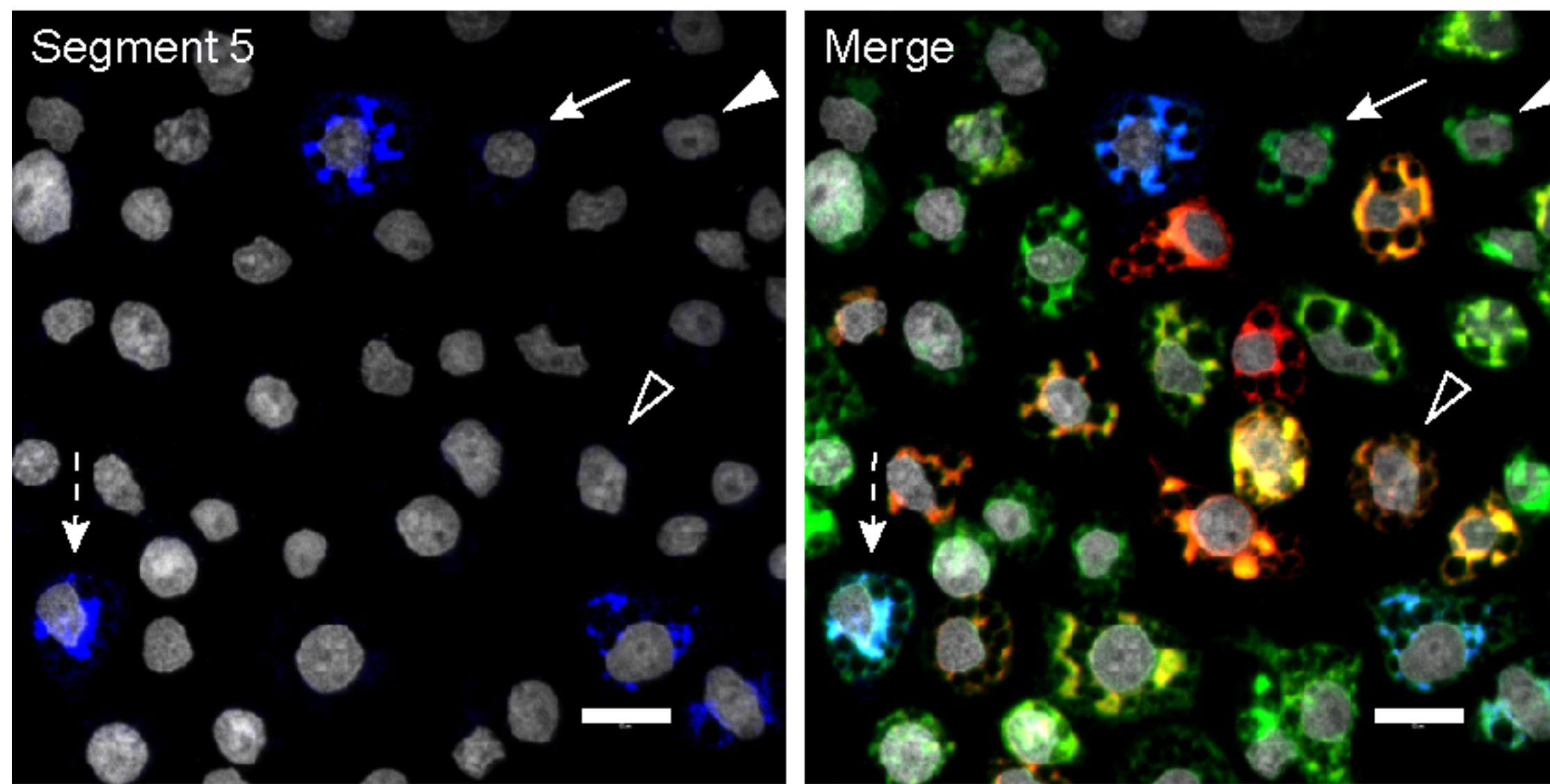
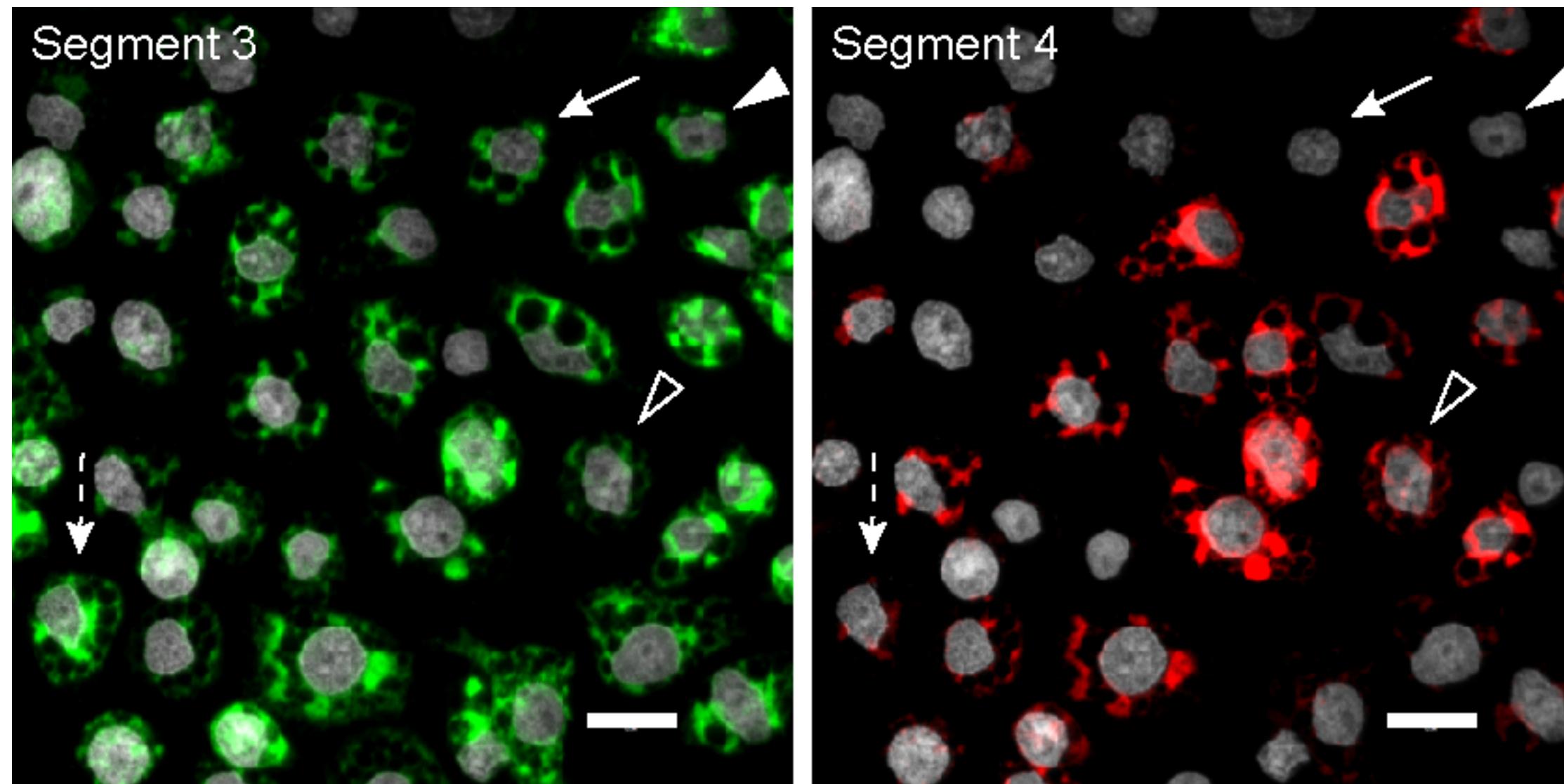


Use vectors whenever possible!

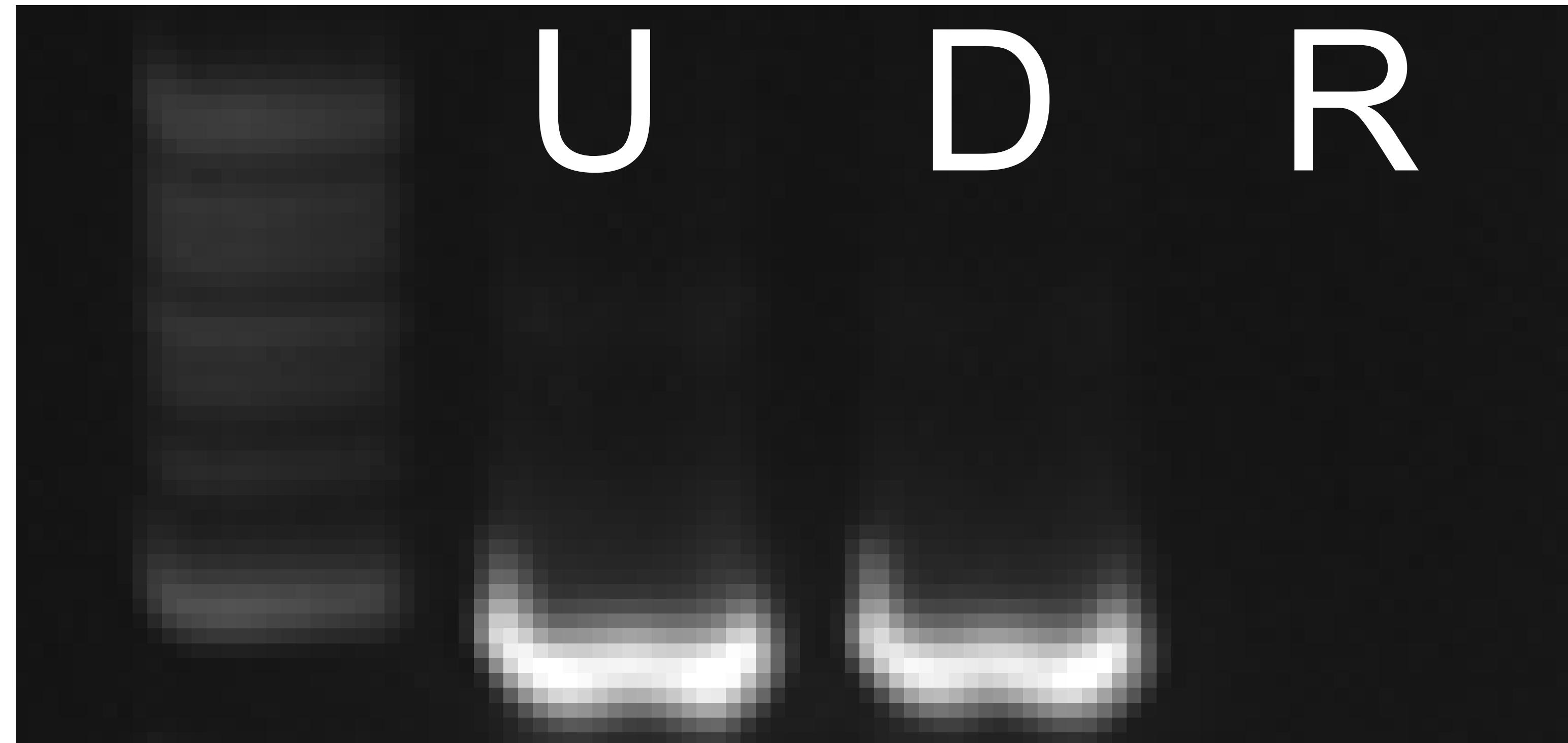
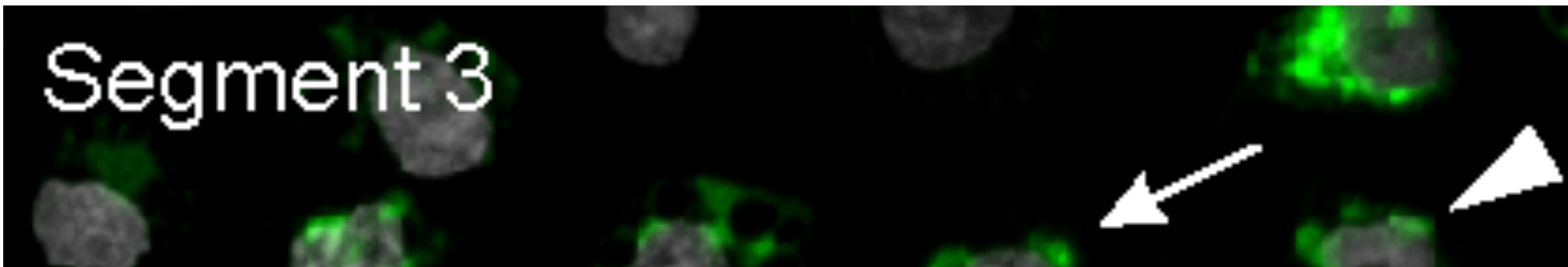


- Maintain clarity at any size
- Easy to edit
- Can always convert to pixels
- Searchable

One exception = photographs



One exception = photographs



How to generate vector images

- Draw images from scratch
- Trace a photograph
- Export from most programs

Know your file formats!

TIFF

PDF

AI

PNG

PSD

PS

EPS

SVG

GIF

BMP

JPEG

JPG

Know your file formats!

TIFF

PDF

PSD

PS

BMP

JPEG

JPG

AI

PNG

EPS

SVG

GIF

Working with vectors



Adobe Illustrator



Inkscape

Working with pixels



Adobe Photoshop



GIMP

Exercises

Objective: Familiarize yourself with both vector-based and pixel-based graphics editing programs