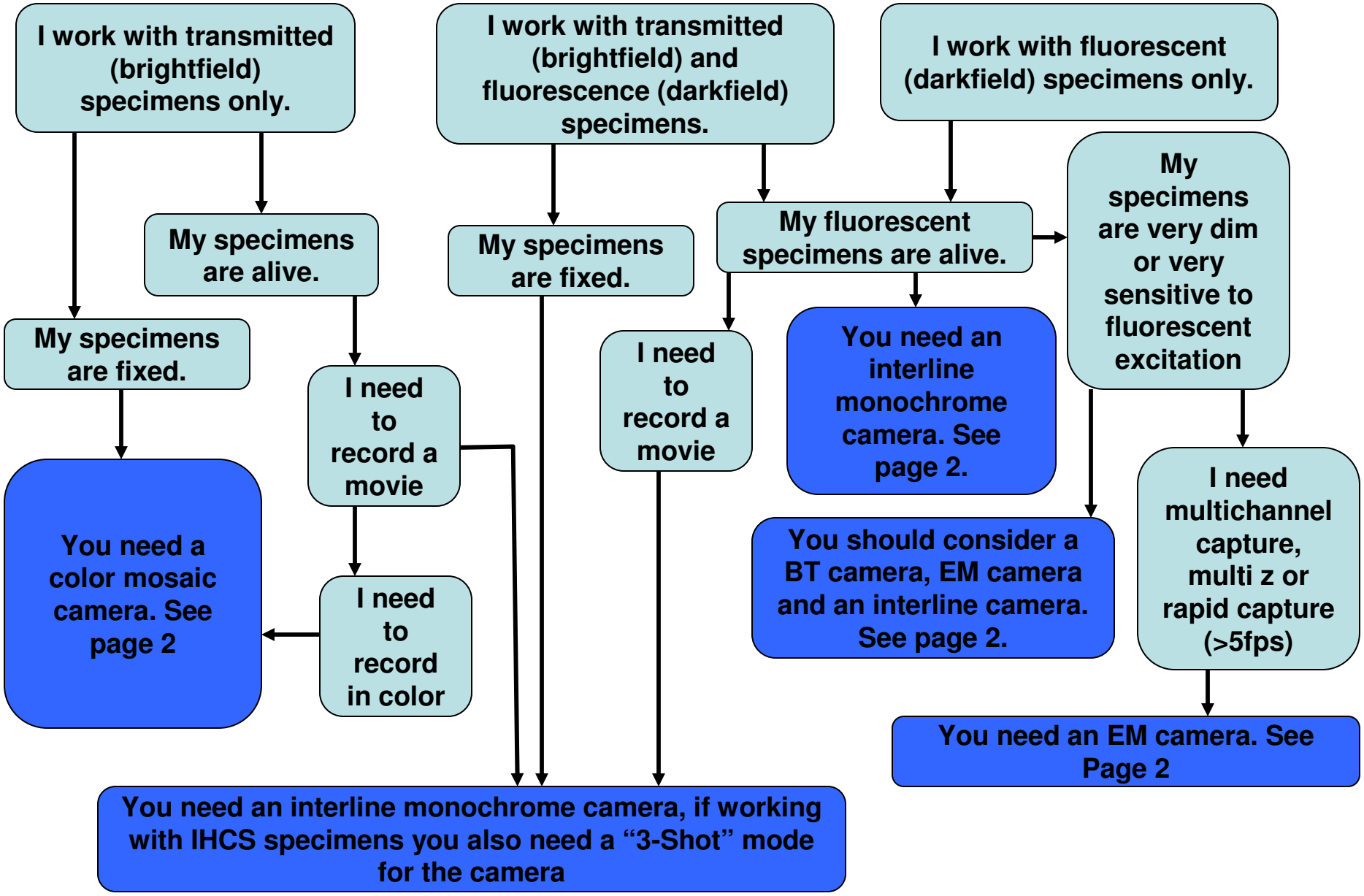
Camera Selection Guide



Major Camera Types

	Color Mosaic	Interline Mono	3-Shot	BT Camera (Back Thinned)	BT EM (Back thinned & Electron Multiplying)
Quantitative	NO	YES	YES	YES	DEPENDS ON MODEL
Fast Acquisition	YES	YES	NO	NO	YES
Sensitivity	LOW	MEDIUM	MEDIUM	HIGH	HIGH
Cost	LOW (1-5k)	LOW-MEDIUM (3-16k)	MEDIUM (8-18k)	HIGH (20-50k)	HIGH (20-50k)
Pixel size (resolution)	SMALL 4-7um	SMALL-MEDIUM 4-8um	SMALL-MEDIUM 4-8um	MEDIUM-LARGE 13-16um	MEDIUM-LARGE 13-16um

See camera types on page 3 for details on each model type. Some application-specific cameras are not listed in this table (such as super-speed cameras).

Type Descriptions

Color Mosaic	Color mosaic cameras use small color filters in front of each pixel to produce color. This gives a single-shot color image, but greatly reduces sensitivity and effects quantitative capability. Avoid the use of these cameras in fluorescent applications. Great for stereo microscopes.
Interline Monochrome	These cameras are similar to mosaic cameras, without the color filters. They usually use pixel sizes between 5-7um, and have readout rates of ~15fps. Good for general use phase, DIC and fluorescence imaging
3-Shot	3-Shot systems combine an interline monochrome camera with an RGB color filter. With the filter in place we can acquire beautiful color images. Removing the filter gives us the sensitivity and fast acquisition of the interline monochrome camera
Back Thinned Camera	BT cameras are chemically etched and flipped. This process provides 90% sensitivity to light. Usually these sensors are combined with slower, yet quiet readout electronics. Framerates will be low, pixels in the 13-16um range, but sensitivity is very high. Use for live specimens with slower acquisition rates, where high FPS is not required.
Back Thinned Electron Multiplying Camera	These cameras take a BT chip and add a signal multiplying circuit. This boosts the signal up to 1000x before readout. With this boost higher readout converters are used. This provides a high-speed low-light capability. Use for live cell imaging with rapid acquisition. (>5-10FPS)
Other Cameras	Many other cameras (high FPS, CMOS, DSLR, Streak) exist. If your application was not described here contact your Technical Instrument Rep for a solution.