10x Genomics BFX resources:

Online resources - 10x documentation and learning resources.

It's important to note that 10x Genomics primarily provides comprehensive online documentation and specific "Analysis Guides" that often contain step-by-step tutorials with code examples. While dedicated "slides" and "videos" for every single tutorial might not exist as separate downloadable items, their support site integrates these elements within their detailed guides. I'll link to the most relevant tutorial sections that often include embedded videos, code snippets, and clear explanations that function as "slides."

Here's the updated table with links to the relevant tutorial sections:

Tool Name	Category	Primary Function	Compatible 10x Genomics Products/Assays	Key Features	Tutorial Links (Slides & Videos)
Cell Ranger	Data Processing	A set of pipelines for processing Chromium Single Cell Gene Expression, Immune Profiling, and Feature Barcode data (e.g., Antibody Capture, CRISPR Guide Capture). It performs alignment, barcode demultiplexing, UMI counting, and generates feature-barcode matrices.	Chromium Single Cell Gene Expression, Single Cell Immune Profiling (TCR/BCR), Feature Barcode (Antibody Capture, CRISPR Guide Capture, Custom Library), Sample Multiplexing (CellPlex, On-chip multiplexing)	Handles various Chromium assay types; generates count matrices, aligned reads (BAM), and other output files for downstream analysis; includes count, multi, vdj, aggr, and reanalyze pipelines for specific tasks.	Cell Ranger Tutorials (Comprehensive guides with examples)
Cell Ranger ATAC	Data Processing	Pipeline for analyzing Chromium Single Cell ATAC data. It identifies open chromatin regions, performs motif annotation, and differential accessibility analysis.	Chromium Single Cell ATAC	Specifically designed for ATAC-seq data; identifies open chromatin peaks; generates peak-barcode matrices.	Cell Ranger ATAC Documentation (Look for "Analysis" and "Tutorials" sections within the documentation)
Cell Ranger ARC	Data Processing	Pipeline for analyzing Chromium Single Cell Multiome ATAC + Gene Expression data. It performs both gene expression and ATAC analysis, integrating the two data modalities.	Chromium Single Cell Multiome ATAC + Gene Expression	Integrates gene expression and chromatin accessibility data from the same cell; enables multi-modal analysis.	Cell Ranger ARC Documentation (Look for "Analysis" and "Tutorials" sections within the documentation)
Space Ranger	Data Processing	A set of pipelines for processing Visium	Visium Spatial Gene Expression	Maps whole transcriptome	Space Ranger Tutorials

		Spatial Gene Expression data, integrating sequencing data with brightfield or fluorescence microscope images to map gene expression within tissue context.	(including Visium HD)	data onto tissue images; generates feature-spot matrices, image alignment files, and H&E images with overlaid gene expression.	(Includes specific guides like "Running spaceranger count")
Xenium Ranger	Data Processing	Pipeline for analyzing Xenium In Situ Gene Expression data, which provides subcellular resolution spatial gene expression.	Xenium In Situ Gene Expression	Processes imaging-based spatial transcriptomics data; generates data for subcellular resolution visualization; enables analysis of gene and protein expression with spatial context.	Xenium Ranger Documentation (Look for "Analysis" and "Tutorials" sections within the documentation)
Loupe Browser	Visualization	An interactive desktop application for visualizing and exploring 10x Genomics single-cell and spatial data. It allows for identification of gene expression patterns, cell clusters, and interactive exploration of data.	Compatible with data from Chromium (Gene Expression, Multiome), Visium, and Xenium.	User-friendly graphical interface; enables dimensionality reduction (UMAP, t-SNE) visualization, cluster identification, differential gene expression analysis, and interactive exploration of cell types and spatial patterns.	Loupe Browser Tutorials (Covers single cell and spatial data visualization, often with embedded GIFs/videos)
Loupe V(D)J Browser	Visualization	An interactive desktop application specifically designed for investigating clonotype information and repertoire diversity alongside gene expression data from Single Cell Immune Profiling assays.	Chromium Single Cell Immune Profiling (TCR/BCR)	Visualizes T-cell and B-cell receptor clonotypes; allows exploration of clonal expansion, diversity, and V(D)J gene usage in conjunction with	Loupe V(D)J Browser Documentation (Relevant information often integrated with Cell Ranger VDJ tutorials or general Loupe Browser tutorials for Immune Profiling data)

				gene expression data.	
Xenium Explorer	Visualization	An interactive visualization tool for exploring Xenium In Situ data, allowing exploration from tissue scale down to subcellular resolution.	Xenium In Situ Gene Expression and Protein Expression	Enables visualization of morphology, protein markers, segmentation, cell typing, and transcript density at high resolution; provides immediate access to data upon run completion.	Xenium Explorer Tutorials (Covers navigation, data quality, and image alignment)
10x Genomics Cloud Analysis	Cloud Platform	A cloud-based platform for running 10x analysis pipelines (Cell Ranger, Space Ranger, Xenium Ranger) on optimized cloud clusters, providing a quick and easy path to results.	Compatible with most Chromium, Visium, and Xenium products (e.g., Single Cell Gene Expression, Immune Profiling, Multiome ATAC + GEX, Visium, Xenium).	Streamlines data processing by leveraging cloud computing; provides secure data management; eliminates the need for local computational resources and complex software installations.	10x Genomics Cloud Analysis Tutorials (Includes walk-throughs and CLI setup videos)
Xenium Panel Designer	Custom Panel Design	A web-based tool for designing custom Xenium In Situ panels, allowing users to combine custom targets with pre-designed panels or build standalone custom panels.	Xenium In Situ Gene Expression	Facilitates the creation of customized gene panels for Xenium experiments; provides flexibility for specific research needs.	Xenium Panel Designer Video Tutorials (Specific video demos embedded within the guide)

Important Note on 10x Genomics Tutorials:

- **Integrated Learning:** 10x Genomics often integrates "slides" (as clear, structured explanations with screenshots and diagrams) and "videos" directly into their online documentation and support pages rather than offering them as separate downloadable files.
- **Analysis Guides:** Many practical tutorials are found within their "Analysis Guides" section on the support site, which provides end-to-end workflows.
- **Support Site Search:** If you're looking for something specific, the 10x Genomics Support site has a robust search function that can help you find relevant tutorials, Q&As, and documentation for any of their tools.