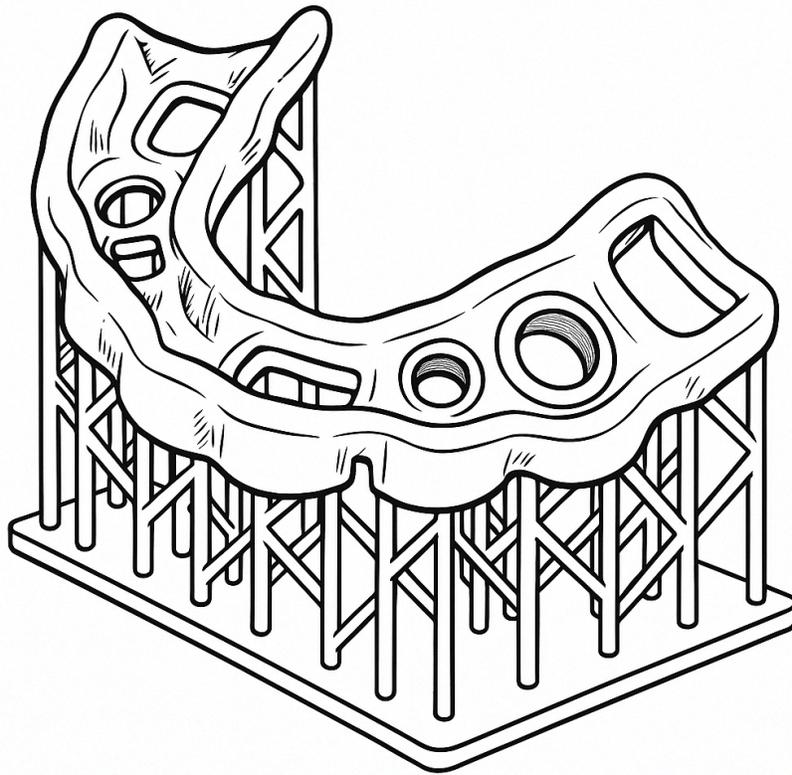# Workflow guide: 3D printing for surgical guides

With SprintRay 3D printing, you can fabricate surgical guides in your office at a fraction of the cost and turnaround time of the conventional manufacturing paradigm.

This guide will walk you through data gathering, design, fabrication, preparation, and placement.
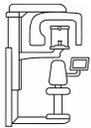

Share your feedback!
Workflow guides are recommendations for a streamlined workflow. When in doubt, consult the IFU for your material. Have a suggestion? Scan the QR code or [click here](#) to share your feedback.

Workflow at a Glance

1.Capture Data

Tools:

- Intraoral scanner
- CBCT scanner

2. Order Design

Tools:

- Computer with internet
- Patient data
- SprintRay account

3. Create Print Job

Tools:

- Computer with internet
- SprintRay account

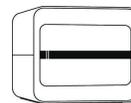## 4. 3D Print

Tools:

- SprintRay 3D printer
- Surgical guide resin

5. Wash

Tools:

- SprintRay wash device

6. Post Cure

Tools:

- SprintRay cure device
- Guide sleeve

7. Sterilize in Autoclave

Tools:
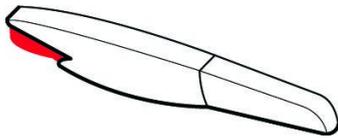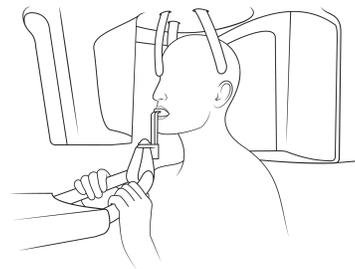
- Autoclave

1. Capture Data

Tools

Intraoral scanner   CBCT scanner

1.1 Scan Upper, Lower, and Bite

Perform a full scan of the patient's existing dentition on the working jaw. A bite scan and opposing arch are optional.
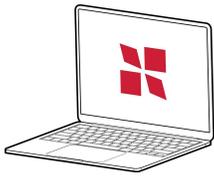
Export the scans in occlusion. This is the default export style for most scanners and eliminates the need for a separate bite scan.

1.2 Capture CBCT scan

Take a CBCT scan with the patient's mouth open and the jaws apart, then export the scan as a multi-file DICOM. In the next step, you'll upload the entire folder of files.
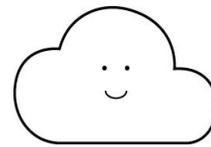
2. Order Your Design

Tools

Computer with internet access

Patient data

SprintRay account

2.1 Submit Treatment Request

Visit dashboard.sprintray.com and sign in or sign up for a SprintRay account. Select or add your patient, then choose the 'Implant Planning and Surgical Guide' option. Upload the patient information collected in step 1, then complete the form.

> ⚠️ *Surgical guide is a highly customizable treatment, including support for immediate restorations, myriad guide types, and almost any implant system. Check the order form to learn more about what's available.*
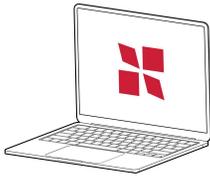
2.2 Review and Approve Design

SprintRay designers will provide a comprehensive implant treatment plan including a drilling protocol and surgical report, plus a full walkthrough video that takes you through the process. Review the treatment plan and approve if the design looks good.

If you'd like changes to your designs, you can request them now. If the treatment is to your liking, approve the design. Once approved, you can send the surgical guide directly to print setup.

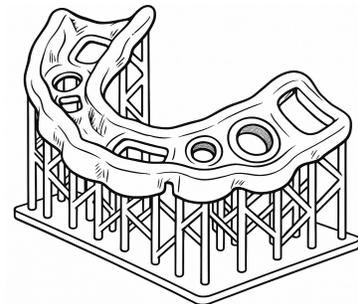# 3. Create Print Jobs

Tools

Computer with internet
access

SprintRay account

3.1 Import into RayWare

Once the treatment is approved, click the 'Send to Print' button to import your surgical guide into Print Setup.

RayWare Setup Details

Job type	Surgical Guide
Material	SprintRay surgical guide material of your choosing
Orientation	Automatic; intaglio facing away from platform; no supports touching drill holes

3.2 Queue to Printer

Once you're happy with your print setup, select the 'Send to Queue' button, then choose the printer you'd like to use for this print job.

4. 3D Print
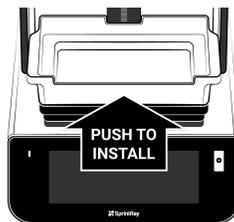
Tools

SprintRay Pro 2 or
Pro/S 3D printer

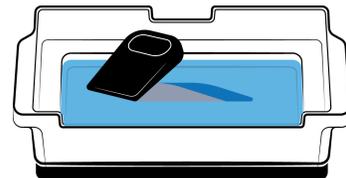SprintRay surgical
guide resin

4.1 Prepare and Start the Print Job

Locked
Ready to print

Check that the platform is
clean, locked, and ready

PUSH TO
INSTALL
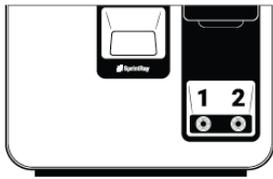
Check that the resin tank is
seated in its cradle

Fill the tank to the max line
with resin and stir

Go to the queue and press 'Start Print'. This
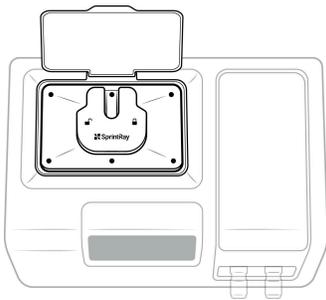print job should take around 25 minutes
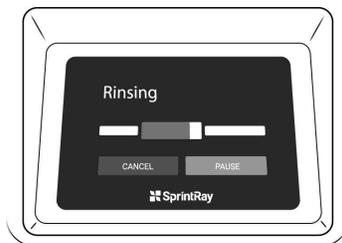
5. Wash

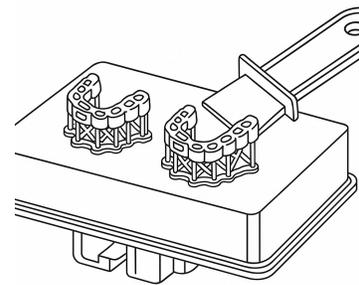Tools

SprintRay wash device

5.2 Wash the Guide

Transfer the build platform to your wash device

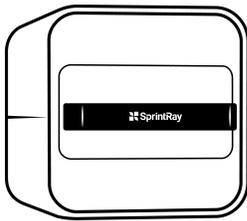Run a standard two-stage cleaning + dry cycle

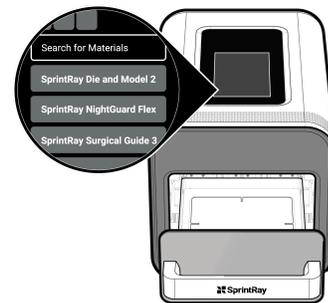Remove the guide from the build platform

y,

6. Post Cure

Tools
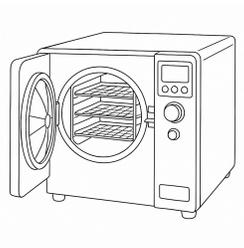

SprintRay cure device

6.1 Post cure

Place the guide in your cure device and select the resin from the list. Follow the onscreen instructions.
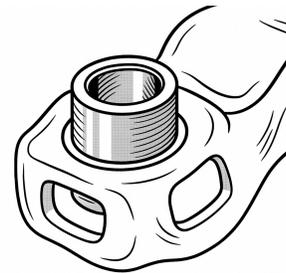

7. Sterilize

Tools

Autoclave

7.1 Insert guide sleeves & sterilize

If you're using metal guide sleeves, insert them into your guide before sterilizing.

Follow the sterilization time and temperature instructions outlined in the IFU for sterilizing SprintRay Surgical Guide resin.