# **EZ**Fluence

# **Automated 3D Planning**



**Automate Your Treatment Planning Workflow in Eclipse™ TPS** 



# Automated 3D Planning. Seamlessly Integrated.

EZFluence is an FDA 510(k) cleared, automated 3D planning software. It generates optimal fluence files and field-in-field plans that you can then import directly into **Varian Eclipse™ TPS**.

Use it for any beam arrangement and any treatment site from head to toe. It standardizes field-in-field planning regardless of user while maintaining or improving plan quality compared to manual techniques.

EZFluence is a Varian Eclipse™ Treatment Planning System plugin that integrates with the TPS through the scripting API.

# By Treatment Planners, For Treatment Planners.

EZFluence is designed by treatment planners to automate 3D planning, including field-in-field planning. Designed to decrease the max dose to the patient while increasing coverage to the target, multiple plan options are calculated so that the treatment planner and physician have flexibility in choosing the optimal plan for the patient.

Get ready to reduce planning time by 85%.

# **EZ**Fluence

Automated 3D Planning

Field-in-Field or E-comp

Automate Skin Flash

Single or Mixed Energies

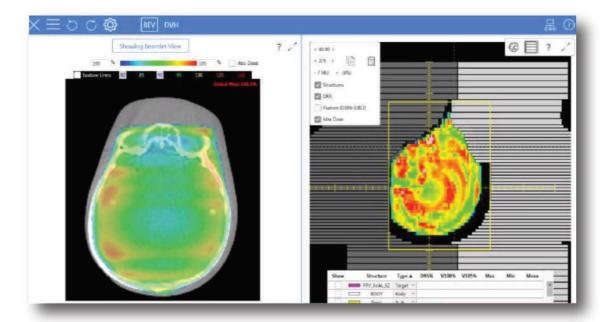
IMRT Justification Planning

Use for Multiple Sites

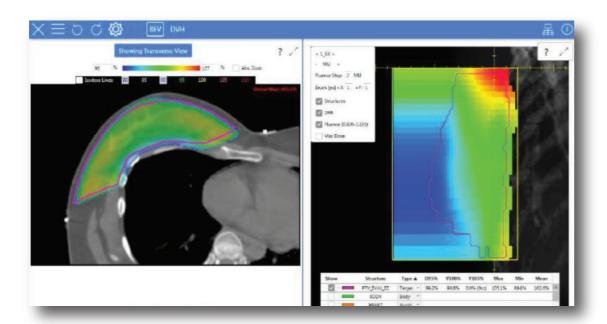


## Automated 3D Planning. Any Site, Any Configuration.

All FiF and E-comp plans automated for any beam arrangement.



Whole brain FiF plans generated with EZFluence offer a homogeneous dose distribution in seconds.



Increase coverage while minimizing the V105% of the breast with EZFluence. Optimal fluences and FiF segments are generated based on your patient's anatomy and the tangents provided.

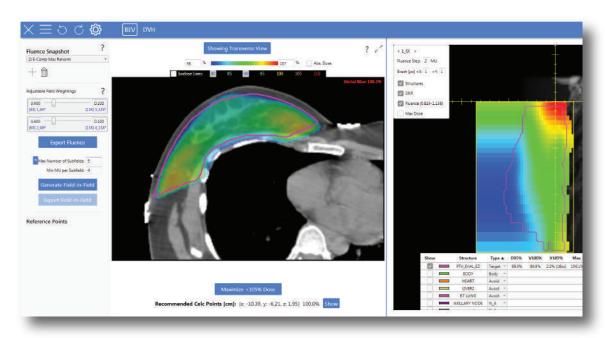


EZFluence works with any beam arrangement to automate even the most complicated 3D plans.



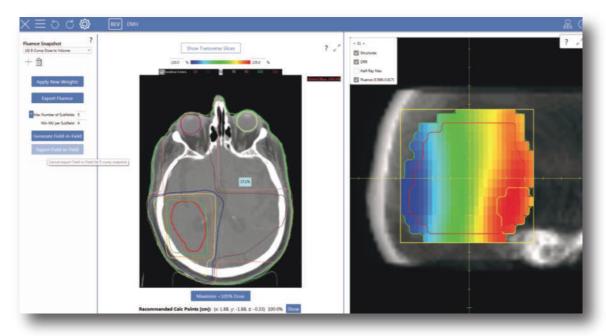
The 3D planning workspace features slider bars which allow for easy beam weighting changes on the fly.

#### **Supports Mixed Energies**



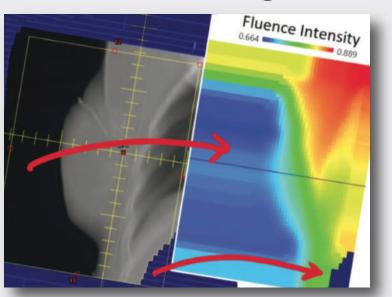
Works with mixed-energy beams for achieving coverage in cases with a large separation.

#### Say Goodbye to Wedges



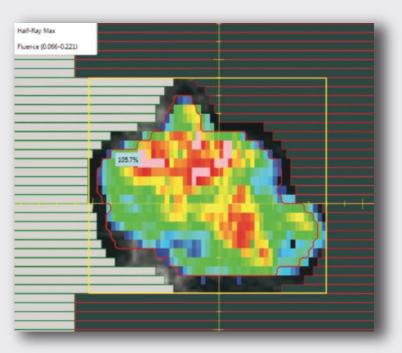
Treat 3D plans that you couldn't treat with wedges due to limitations.

#### **Preserve Blocking**



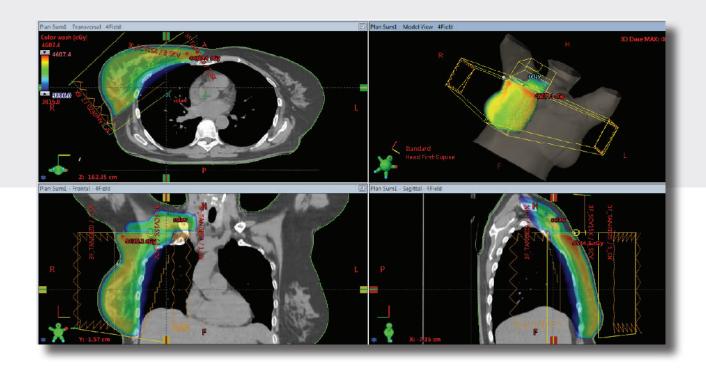
Control dose to OAR structures and automatically generate a custom PTV Eval structure.

#### **Edit Apertures**

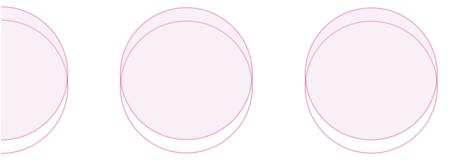


Fully customize your MLC. Real-time fluence editing, real-time dosimetric updates seen immediately on your plan.

#### 3-Field and 4-Field Breast Planning



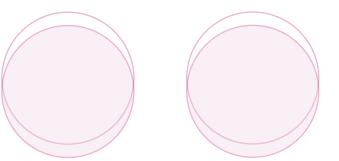
EZFluence automatically sets the sclav and PAB field weighting. Control the match line in monoisocentric plans with EZFluence by increasing coverage and minimizing hot spots.



#### **Automated IMRT Billing Justification Planning**



Billing justification plans are no longer a hassle or a stress to clinical resources; our automatic 3D converter tool takes the pain out of the justification process. Any IMRT or VMAT plan can be easily converted to a 3D plan in a matter of seconds.







## Radformation Automation Software Reduces Breast Cancer Planning Time by 85% in Stony Brook University Hospital Study

#### Purpose/ Objectives

This study compared the EZFluence planning technique for irradiation of the breast with commonly used Field-in-Field (FiF) technique by analyzing the dose uniformity, the dose to the lung, heart, and other organs at risk, the total Monitor Unit (MU), and the time spent for planning.

### Material & Methods

The study consisted of 2 components: (1) EZFluence commissioning and validating using RadCalc (LifeLine Software, Inc), MapCheck (Sun Nuclear Corp), and Portal Dosimetry (PD; Varian Medical Systems), and (2) a retrospective patient study to compare dosimetric impact between FiF and EZFluence methods.

For commissioning and validating purposes, 10 patients were selected. MU calculated by Eclipse was checked using RadCalc software. The fluence generated by EZFluence for the same patient was measured and verified using either MapCheck or PD. For the dosimetric studies, 20 patients scheduled for whole breast external beam radiotherapy after breast-conserving surgery were included.

#### Results

Stony Brook University found that "The EZFluence planning technique yielded the overall comparable or improved dosimetry while significantly reducing planning time... Our results show that the EZFluence planning technique is the more efficient technique that requires the least planning time while delivering comparable dose to the target volume and limiting dose to the OARs..."(Yoder et al. 1-4)

Mean time for definition, evaluation, and documentation of these constraints was 6.2 and 1.9 minutes for manual and automated processes, respectively.

Due to increased evaluation simplicity and efficiency, the automated process led to a >30% increase in the number of constraints evaluated per plan. It also allows simple evaluation of complex metrics without additional planning requirements, such as the creation of structure contours from isodose surfaces to evaluate common plan quality indices.

#### Summary/ Conclusion

This study has shown that plans created by EZFluence have comparable dose limits to the OARs while generating homogenous breast plans. The time used to create tangent plans using EZFluence is reduced by 84.6%, from an average of 25.6 minutes with FiF technique to an average of 3.7 minutes using the EZFluence software.

This suggests that EZFluence is a better option when comparing to FiF technique in terms of time required for planning while generating a plan that is comparable in all the dose parameters.

Yoder, T., Hsia, A. T., Xu, Z., Stessin, A., & Ryu, S. (2019). Usefulness of EZFluence software for radiotherapy planning of breast cancer treatment. Medical Dosimetry, 1-5. doi:10.1016/j.meddos.2018.12.001

### EZFluence reduces planning time by 85%.

Based on Stony Brook University Hospital results.

#### With EZFluence, your clinic will...



Reduce planning time by 85%



Support a higher patient throughput



Optimize plan quality

EZFluence proved to reduce a planning time of 30 minutes to less than 4 minutes.