

p53 Biomarkers Predict Advexin (Adenoviral p53) Efficacy in Pivotal Clinical Trials of Recurrent Squamous Cell Carcinoma of the Head and Neck (SCCHN)

#1391

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NOTICE

The data, opinions and conclusions presented herein are preliminary. This information and additional relevant information have not yet been presented in their entirety to the U.S. Food and Drug Administration (FDA), European Medicines Evaluation Agency (EMA) or other regulatory authorities; although we anticipate submitting materially all of this information to the FDA, EMA and corresponding foreign authorities in the future. Populations and endpoint combinations shown were all prospectively identified in the Phase 3 clinical study Statistical Analysis Plan submitted as requested by the FDA. Only the FDA, EMA and corresponding regulatory agencies have the authority to approve pharmaceutical products. We cannot predict how such authorities may interpret the information contained in this presentation or may respond to our regulatory submissions.

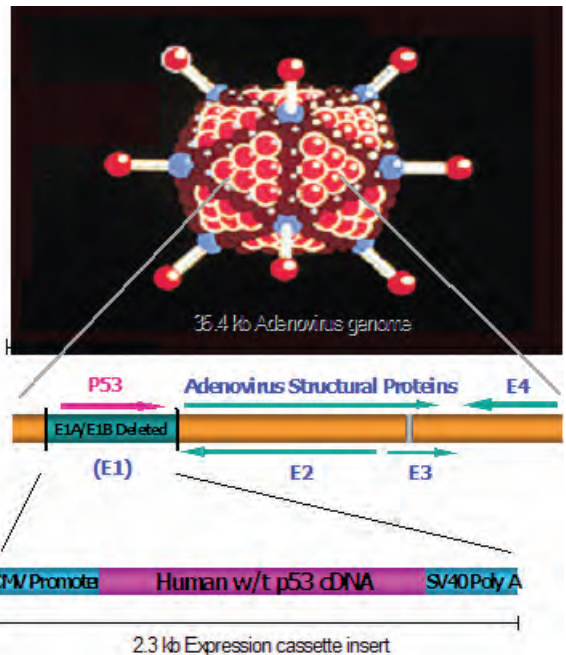
Forward-Looking Statements

Further, statements in this presentation that are not strictly historical may be "forward-looking" statements, including those relating to the ADVEXIN clinical development program and regulatory submissions. The actual results may differ from those described in this presentation due to many risks and uncertainties, including those risks detailed from time to time in Introgen's filings with the Securities and Exchange Commission, including its filings on Form 10-K and Form 10-Q. Introgen undertakes no obligation to publicly release the results of any revisions to any forward-looking statements that reflect events or circumstances arising after the date hereof.

INTRODUCTION

ADVEXIN® Adenoviral p53

- ADVEXIN is a genetically modified adenovirus that does not replicate



- ADVEXIN is engineered to deliver a normal p53 gene

- ADVEXIN is injected into the tumor and expresses normal p53 protein that has anti-tumor therapeutic activity



Cancer injected with ADVEXIN

ADVEXIN® Head and Neck Cancer Clinical Trials

Trial	Type	Phase	Number of Patients (Advexin)	Description
T301	Pivotal	Phase 3	123 (63)	Randomized Controlled Multicenter vs. Methotrexate
T201	Pivotal	Phase 2	112 (112)	Randomized Controlled Multicenter Dose Comparison

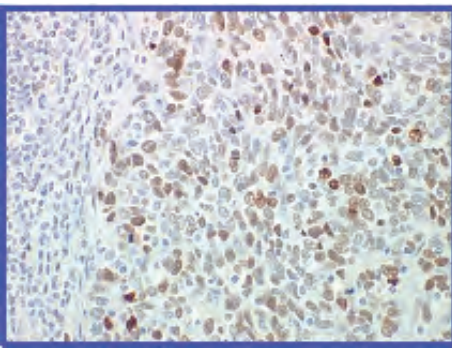
Preliminary data

Presented at the AACR Annual Meeting, April 12-16, 2008, San Diego, California, USA

METHODS

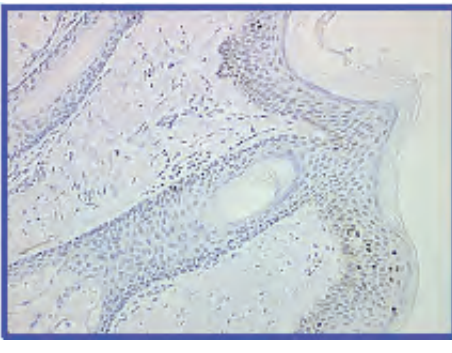
Combined Protein and Gene p53 Biomarkers Predict ADVEXIN Efficacy

p53 Protein Levels by Immunohistochemistry



High p53 Levels

or



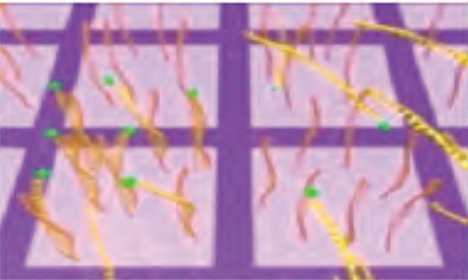
Low p53 Levels (normal)

p53 Gene Sequence by Gene Chip Analysis



Mutated p53

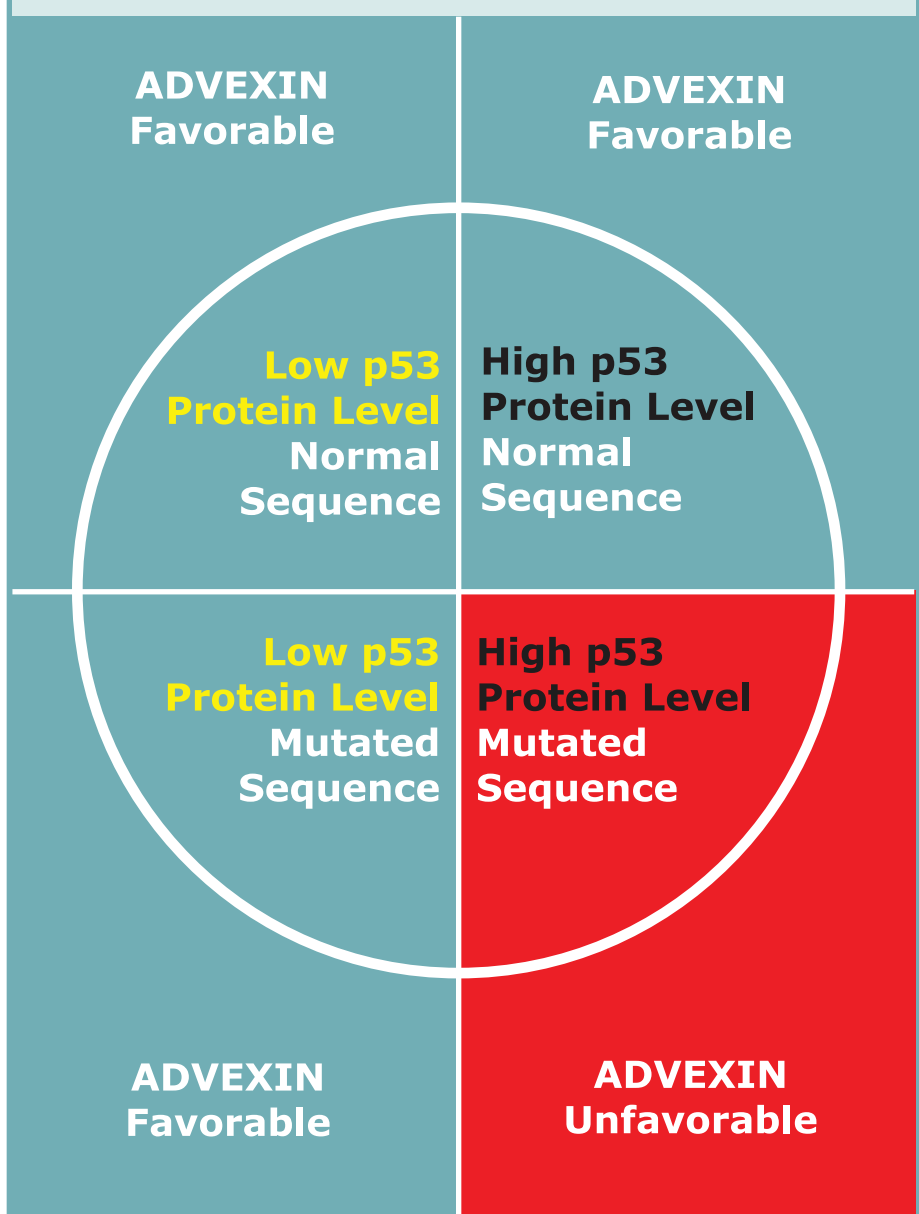
or



Normal p53

Preliminary data

Patient Populations with Blocked p53 Tumor Suppression



p53 Inactivation in Cancer

Direct Mechanisms
Structural Abnormalities

Indirect Mechanism
Increased Inhibitors

Mutations
Deletions

p53

mdm-2
mdm-4

p53 Biomarkers

p53 Sequence -- Mutated

Immunohistology -- High or Normal

ABNORMAL PROTEIN

p53 Biomarkers

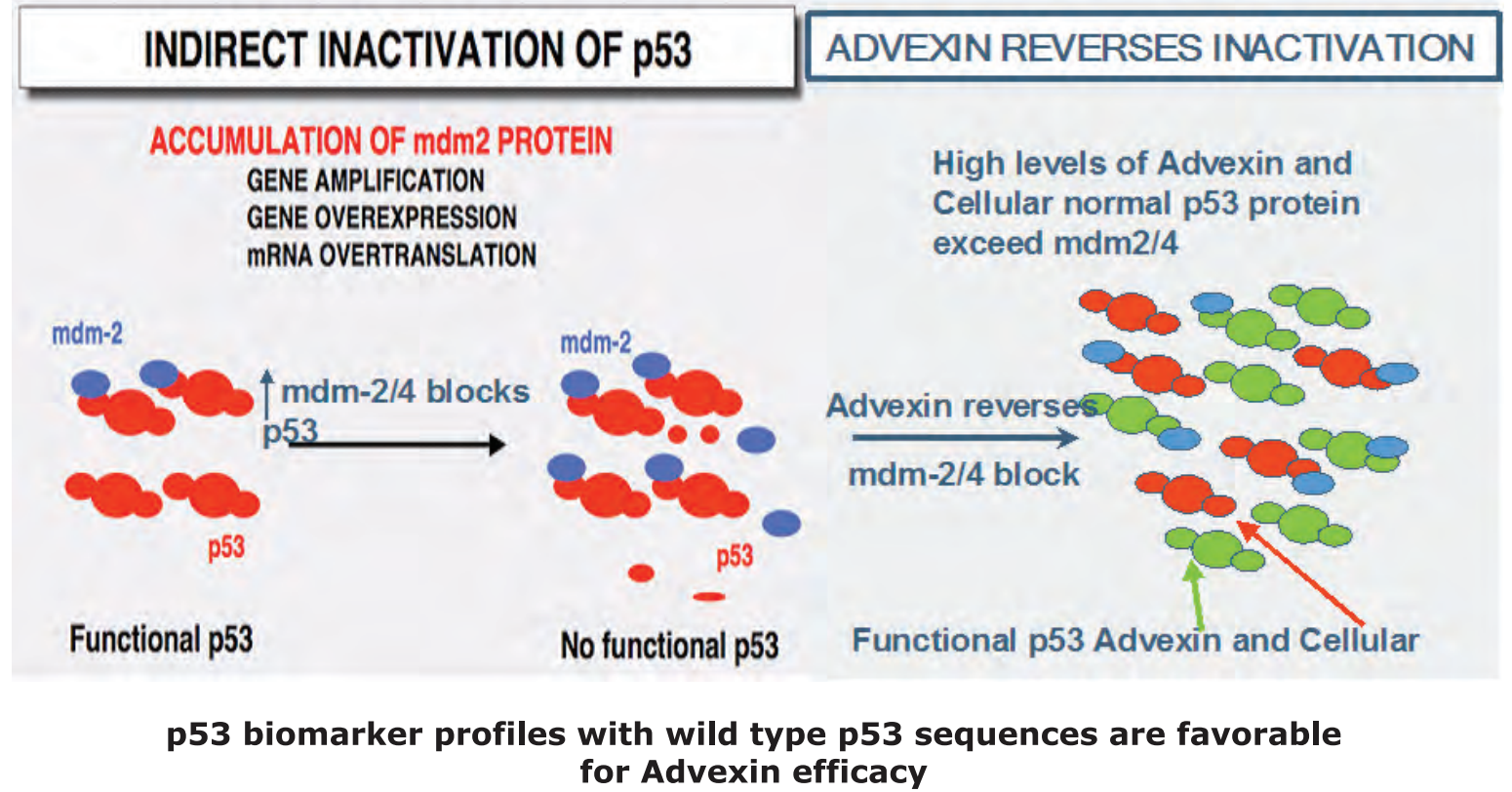
p53 Sequence -- Wild Type

Immunohistology -- High or Normal

NORMAL PROTEIN

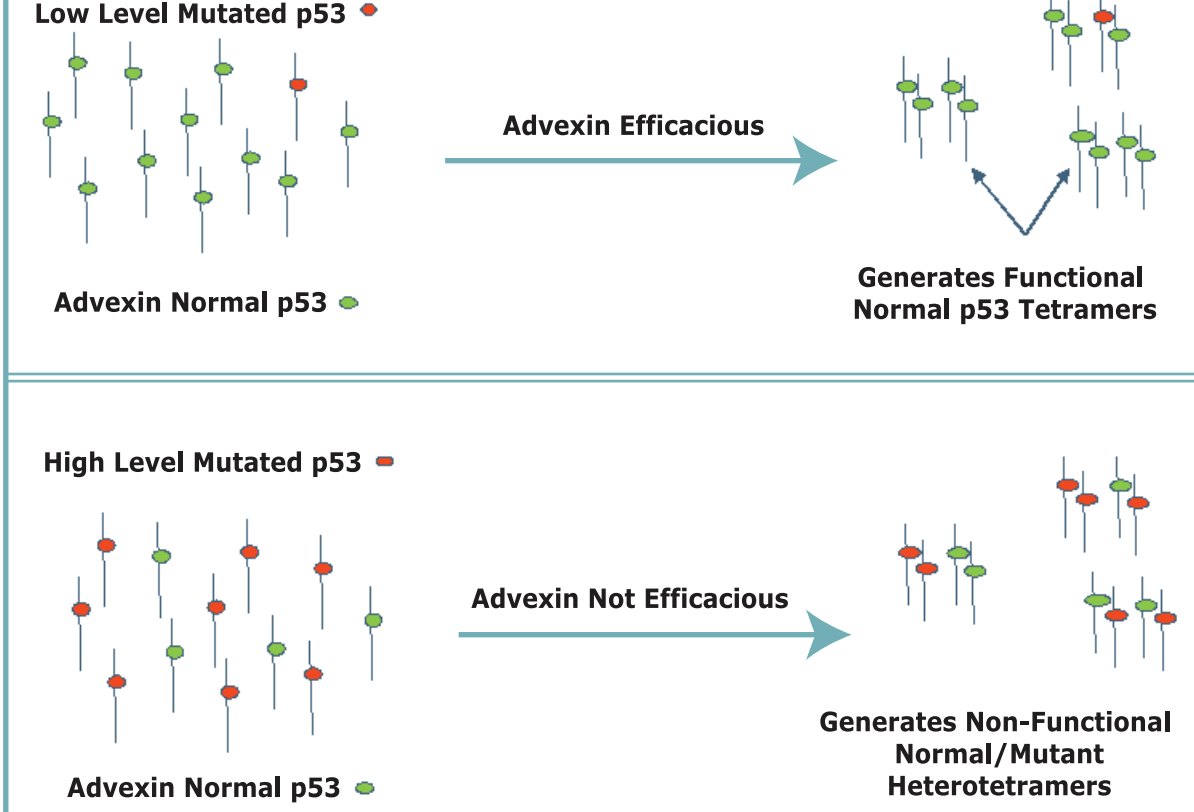
RESULTS

Inactivation of wild type p53 by mdm-2/4 is reversed by Advexin treatment



Preliminary data

Advexin Efficacy is Affected by Level of Mutant p53



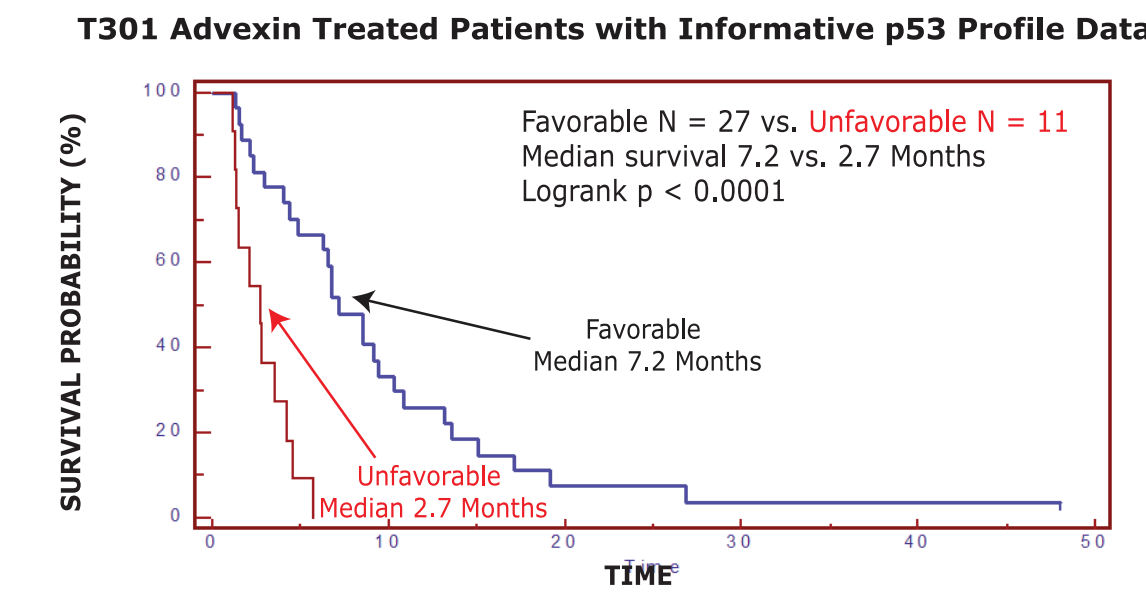
Preliminary data

p53 Biomarker Profiles for Advexin Efficacy Predict Tumor Growth Control in Recurrent SCCHN

INT-002, T201 and T301 Advexin Treated Patients with p53 Profile Data	
p53 Profile	Tumor Growth Control
Favorable	45/57 (79%)
Unfavorable	2/8 (25%)
Fisher's exact test p-value = 0.004	
Absolute Correlation between > 10% Reduction in tumor size and favorable p53 biomarker profiles for Advexin efficacy	

Preliminary data

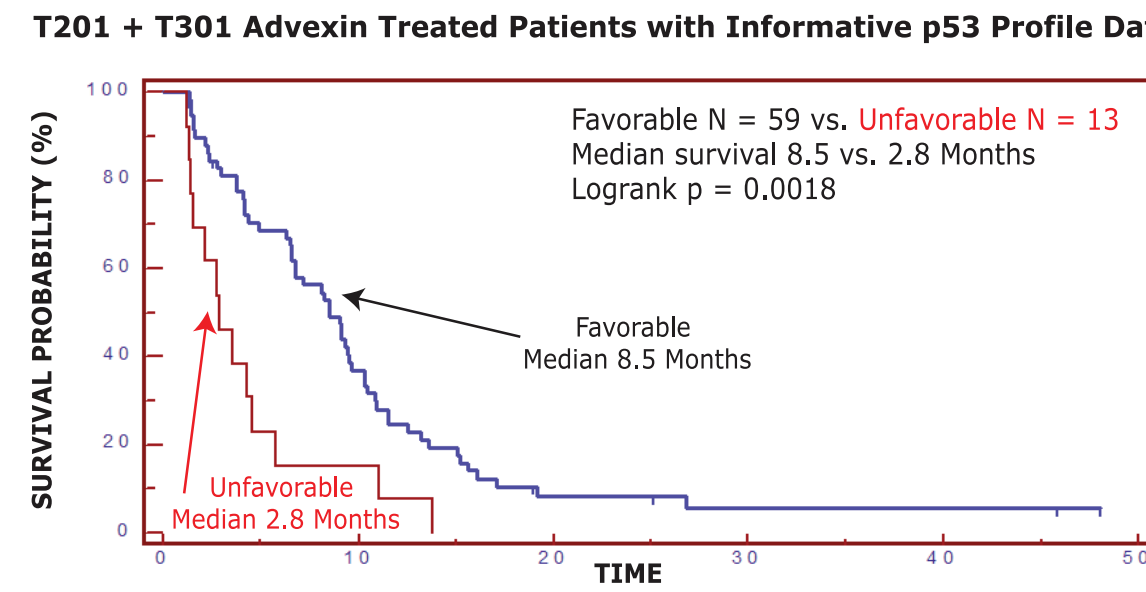
p53 Profiles Favorable and Unfavorable for Advexin Efficacy Predict Advexin Survival Benefit in Recurrent SCCHN



Favorable – High Level WT p53; Low Level Mutated p53; Low Level WT p53 Unfavorable – High Level Mutated p53

Preliminary data

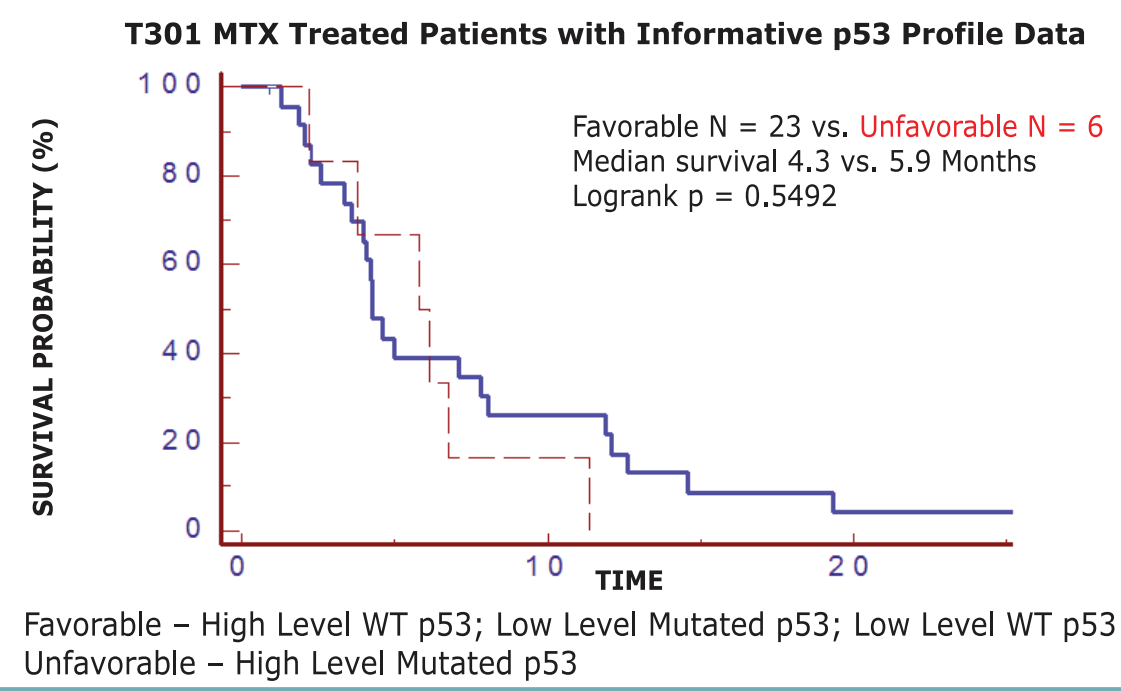
p53 Profiles Favorable and Unfavorable for Advexin Efficacy Predict Advexin Survival Benefit in Recurrent SCCHN



Favorable – High Level WT p53; Low Level Mutated p53; Low Level WT p53 Unfavorable – High Level Mutated p53

Preliminary data

p53 Profiles Favorable and Unfavorable for Advexin Efficacy Do Not Predict MTX Outcome in Recurrent SCCHN



Preliminary data

Tumor Growth Control Occurs in Different Patient Populations Following Advexin and MTX Treatment

T301A Advexin Treated Patients N = 31		T301B Methotrexate Treated Patients N = 35	
p53 Gene Status	Tumor Growth Control	p53 Gene Status	Tumor Growth Control
Wild Type	12/14 (86%)	Wild Type	11/20 (55%)
Mutated	9/17 (53%)	Mutated	13/15 (87%)
Fisher's exact test p-value = 0.0580		Fisher's exact test p-value = 0.0493	

Preliminary data

SUMMARY

p53 Molecular Biomarker Results Recurrent Head and Neck Cancer Advexin Pivotal Trials

- Favorable p53 Biomarker profiles identify patients most likely to benefit from Advexin
 - Statistically significant increase in response
 - Statistically significant increase in survival
 - Absolute correlation between tumor reduction and favorable p53 biomarker profiles
 - p53 profiles predictive of Advexin efficacy do not predict MTX efficacy

Preliminary data