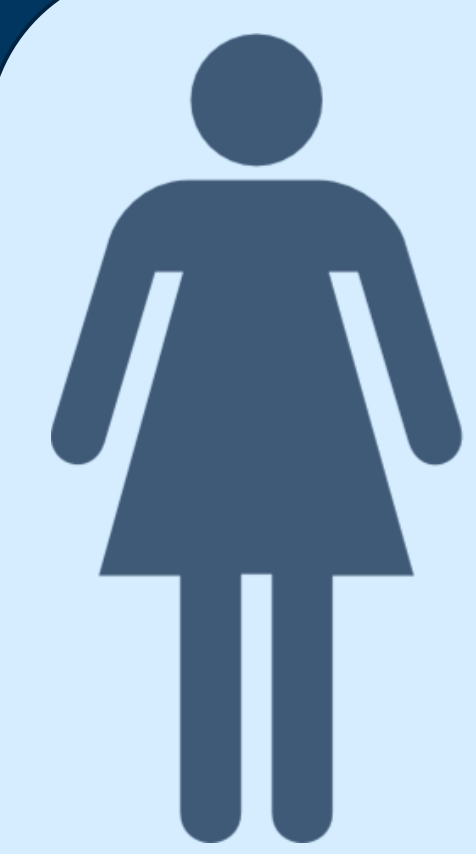


ABSTRACT

Lung cancer treatment options have expanded significantly in the past decade, beginning with the increased understanding of specific gene mutations that drive or enable growth of the cancer. The testing to identify these mutations is the first step in determining if a patient can benefit from the targeted therapies currently approved or in development in clinical trials. Despite the enthusiasm around the potential of using targeted therapy in the treatment of lung cancer, evidence suggests that not all eligible patients are benefiting from targeted therapy, due in part to lack of tumor testing. To help assess whether inconsistent communications could be a contributor to the suboptimal rates of testing for biomarkers related to lung cancer treatment, we conducted a communications audit. The aims of the audit was:

1. **Identify and inventory the various terms being used to reference molecular tumor testing**
2. **Identify the audiences organizations are addressing, i.e., Who is talking to patients and who is talking to the medical community?**
3. **Catalog the message and calls to action, to identify any differences in the way the many organizations with a stake and interest in molecular testing and/or targeted therapy are communicating**
4. **Identify the implications of these differences for patient and medical community understanding, and application of, molecular testing for lung cancer**

METHODS



Getting the patient perspective

In-depth interviews with 15 lung cancer patients to gain insights into their understanding and experiences with molecular testing and related procedures and therapies



Language audit of major organizations

- 28 organizations were included in the audit
- Cancer organizations, lung cancer advocacy groups, government and general health sites, pharmaceutical and biotech companies (including patient-focused microsites), and testing companies

Key stakeholder engagement at WCLC 2015, Denver



MAJOR FINDINGS AND IMPLICATIONS

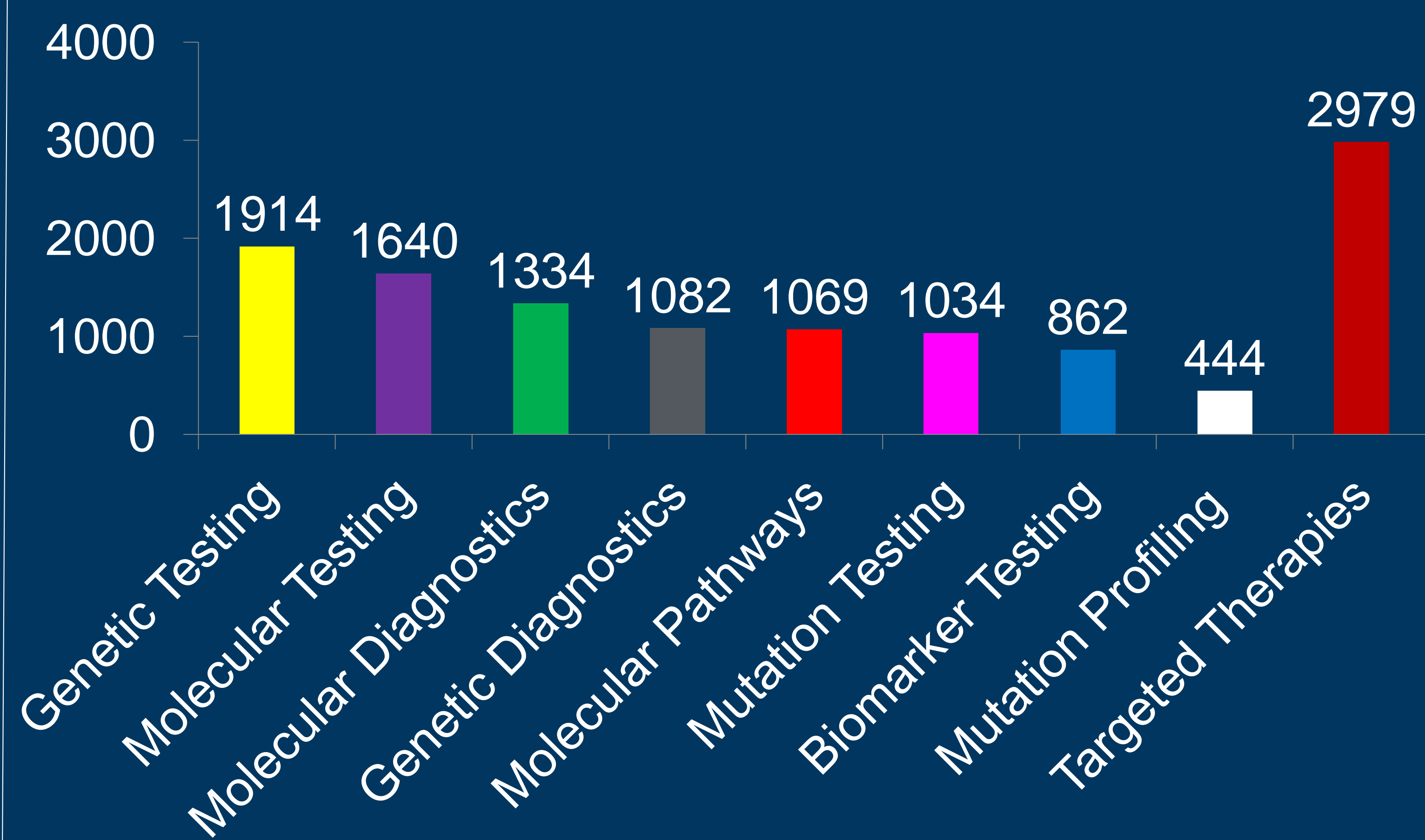
Terms inventoried:

Molecular testing
Molecular diagnostics
Biomarker testing
Molecular pathways
Personalized medicine
Genetic testing and/or genetic diagnostic
Mutation testing/mutation profiling
Targeted therapies

Less common:

Biomarker panel, Companion diagnostic, Comprehensive genomic profiling, Genomic profiling, Genomic testing, Individualized medicine, Molecular companion diagnostic, Personalized medicine, Precision medicine, Tumor gene panel testing, Tumor marker tests

Stakeholders are using a variety of terms. Patient advocacy groups make an effort to bridge the terms.



Searched Terms	Pharma/ Biotech	Testing	Gov't/ Private	Cancer Orgs	Lung Cancer Orgs
Genetic Testing	77	65	1082	295	395
Molecular Testing	173	270	742	124	331
Mutation Testing	21	111	485	143	274
Biomarker Testing	109	172	390	29	156
Genetic Diagnostic	26	66	770	111	109
Molecular Diagnostics	113	231	798	94	98
Mutation Profiling	22	78	254	2	88
Molecular Pathways	74	91	787	35	88

What are patients saying? - Too many terms used without adequate explanation

"When people are diagnosed, they don't know any of these terms.... We don't go around studying cancer and what to do when it hits us, because we don't think it will ever happen to us. Then all of a sudden we are faced with a life threatening disease. We need to find answers, and we need to find them quick. It makes it difficult that there is not standard terminology."

"I don't think a lot of people understand the science, nor are they interested. I would like information to be more in layman's terms. You start to care after you know your mutation, when you know 'I'm ALK positive.' People want to know this is the cancer I have and then they want to know the targeted therapies."

Stakeholder engagement

All agreed on the importance of a more unified voice and message to help the medical community and patients.

BIOMARKER TESTING was the strong favorite. It integrates the concept of "biology" of the tumor, and is more inclusive than "molecular testing," now that PD-L1 testing is also a consideration

MOLECULAR TESTING was favored by a smaller subset, although they also agreed to use of biomarker testing. All of the other terms dismissed for various reasons

1. **Patient confusion created by use of term "genetic testing." This implies a hereditary component.**
2. **Overall there are too many terms, inconsistently used.**
3. **Divisions between terms used to talk to health care practitioners and those used to talk to patients – setting up a communications gap.**
4. **Lack of information in the clinical setting means learning about and understanding of testing is often left to word-of-mouth.**
5. **Patients and stakeholders realize the need for CONSISTENT terminology. Proposed term for use is **BIOMARKER** testing**